Statement:

This manual is the intellectual property of FOXCONN, Inc. Although the information in this manual may be changed or modified at any time, FOXCONN does not obligate itself to inform the user of these changes.

Trademark:

All trademarks are the property of their respective owners.

Version:

User's Manual V1.0 in English for 945P7AA series motherboard.

P/N: 91-181-945-A1-0E

Symbol description:

Note: refers to important information that can help you to use motherboard better.

Attention: indicates that it may damage hardware or cause data loss, and tells you how to avoid such problems.

Warning: means that a potential risk of property damage or physical injury exists.

More information:

If you want more information about our products, please visit FOXCONN website: www.foxconnchannel.com

Declaration of conformity

CE

HON HAI PRECISION INDUSTRY COMPANY LTD
66 , CHUNG SHAN RD., TU-CHENG INDUSTRIAL DISTRICT,
TAIPEI HSIEN, TAIWAN, R.O.C.

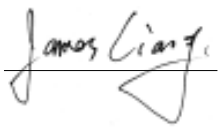
declares that the product

Motherboard

945P7AA series

is in conformity with
(reference to the specification under which conformity is declared in accordance with 89/336 EEC-EMC Directive)

☑ EN 55022/A1: 2000	Limits and methods of measurements of radio disturbance characteristics of information technology equipment
☑ EN 61000-3-2/A14:2000	Electromagnetic compatibility (EMC) Part 3: Limits Section 2: Limits for harmonic current emissions (equipment input current <= 16A per phase)
☑ EN 61000-3-3/A1:2001	Electromagnetic compatibility (EMC) Part 3: Limits Section 2: Limits of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current <= 16A
☑ EN 55024/A1:2001	Information technology equipment-Immunity characteristics limits and methods of measurement

Signature :  Place / Date : TAIPEI/2005

Printed Name : James Liang Position/ Title : Assistant President

Declaration of conformity

FC

Trade Name:	FOXCONN
Model Name:	**945P7AA**
Responsible Party:	PCE Industry Inc.
Address:	458 E. Lambert Rd.
	Fullerton, CA 92835
Telephone:	714-738-8868
Facsimile:	714-738-8838
Equipment Classification:	FCC Class B Subassembly
Type of Product:	Motherboard
Manufacturer:	**HON HAI PRECISION INDUSTRY COMPANY LTD**
Address:	66 , CHUNG SHAN RD., TU-CHENG INDUSTRIAL DISTRICT, TAIPEI HSIEN, TAIWAN, R.O.C.

Supplementary Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Tested to comply with FCC standards.

Signature : James Liang Date : 2005

Table of Contents

Chapter 1 Product Introduction

Main Features 2
Motherboard Layout 5

Chapter 2 Installation Instructions

CPU 8
Memory 12
Power Supply 14
Rear Panel Connectors 15
Other Connectors 17
Expansion Slots 23
Jumpers 25

Chapter 3 BIOS Description

Enter BIOS Setup 29
Main menu 29
Standard CMOS Features 31
BIOS Features 34
Advanced BIOS Features 37
Advanced Chipset Features 40
Integrated Peripherals 42
Power Management Setup 46
PnP/PCI Configurations 51
PC Health Status 52
Load Fail-Safe Defaults 54
Load Optimized Defaults 54
Set Supervisor/User Password 54
Save & Exit Setup 55
Exit Without Saving 55

Table of Contents

Chapter 4 Driver CD Introduction

Utility CD content 57
Start to install drivers 58

Chapter 5 Directions for Bundled Software

SuperStep 61
SuperUpdate 64
SuperLogo 68

Chapter 6 Special BIOS Functions

SuperBoot 71
SuperBIOS-Protect 72
SuperRecovery 73
SuperSpeed 82

Appendix

Using 8-channel Audio (optional) 83

Warning:

1. Attach the CPU and heatsink using silica gel to ensure full contact.
2. It is suggested to select high-quality, certified fans in order to avoid damage to the motherboard and CPU due high temperatures.
3. Never turn on the machine if the CPU fan is not properly installed.
4. Ensure that the DC power supply is turned off before inserting or removing expansion cards or other peripherals, especially when you insert or remove a memory module. Failure to switch off the DC power supply may result in serious damage to your system or memory module.

Warning:

We cannot guarantee that your system will operate normally while over-clocked. Normal operation depends on the over-clock capacity of your device.

Attention:

Since BIOS programs are upgraded from time to time, the BIOS description in this manual is just for reference. We do not guarantee that the content of this manual will remain consistent with the actual BIOS version at any given time in the future.

Attention:

The pictures of objects used in this manual are just for your reference. Please refer to the physical motherboard.

This manual is suitable for motherboard of 945P7AA series. Each motherboard is carefully designed for the PC user who wants diverse features.

-L	with onboard 10Mb/100Mb LAN
-K	with onboard 1Gb LAN
-6	with 6-Channel audio
-8	with 8-Channel audio
-E	with 1394 function
-S	with SATA function
-R	with RAID function

You can find PPID label on the motherboard. It indicates the functions that the motherboard has.

For example:

On the blue mark of the PPID label, it means the motherboard supports 6-channel audio(-6), 1394 port(-E), onboard 10Mb/100Mb LAN (-L), SATA function(-S).

Chapter 1

Thank you for purchasing FOXCONN 945P7AA series motherboard. This series of motherboard is one of our new products, and offers superior performance, reliability and quality, at a reasonable price. This motherboard adopts the advanced Intel® 945P+ ICH7/ICH7R chipset, providing users a computer platform with a high integration-compatibility-performance price ratio.

This chapter includes the following information:

- Main Features
- Motherboard Layout

Main Features

Size

- ATX form factor of 12 inch x 9.6 inch

Microprocessor

- Supports Intel® Pentium® 4 processor in an LGA775 package
- Supports FSB at 533MHz/800MHz/1066 MHz
- Supports Hyper-Threading technology
- Supports FSB Dynamic Bus Inversion (DBI)

Chipset

- Intel® 945P (North Bridge) + ICH7/ICH7R (South Bridge)

System Memory

- Four 240-pin DDR2 DIMM slots
- Supports Dual-Channel DDR2 533/667 DIMMs
- Available bandwidth up to 5.3GB/s (DDR2 667) for Single-Channel mode and 10.7 GB/s (DDR2 667) in Dual-Channel Interleaved mode
- Supports 256 Mb, 512 Mb, and 1 Gb DDR2 technologies for x8 and x16 devices
- Supports up to 4GB memory capacity
- Supports non-ECC DIMMs only

USB 2.0 Ports

- Supports hot plug
- Eight USB 2.0 ports (four rear panel ports, two onboard USB connectors providing four extra ports)
- Supports wake-up from S1 and S3 mode
- Supports USB 2.0 Protocol up to 480 Mbps transmission rate

Onboard Serial ATA (optional)

- 300 MBps transfer rate
- Supports up to four S-ATA devices
- Supports RAID 5, RAID 0, RAID 1, RAID 10, Matrix RAID (supported on ICH7R)

Onboard IDE RAID Controller (IT8212)(optional)

- Two Ultra DMA 133/100/66 IDE connectors
- Supports RAID 0, RAID 1, RAID 0+1, and JBOD configuration

Onboard LAN (-L/-K) (optional)

- Supports 10/100/1000 (-K optional) Mbit/sec Ethernet
- LAN interface built-in on board

Onboard 1394 (-E) (optional)

- Support hot plug
- With rate of transmission at 400Mbps
- Self-configured addressing
- Can connect with 2 independent 1394 units synchronously at most

Onboard Audio (-6) (optional)

- AC'97 2.3 Specification Compliant
- Supports SPDIF output
- Onboard Line-in jack, Microphone jack, Line-out jack
- Supports 6-channel audio (setting via software)

Onboard Audio (-8) (optional)

- Supports 8-channel audio
- Supports SPDIF output
- Supports Intel High Definition Audio
- Supports high quality differential CD input

PCI Express x16 Support

- Supports 4 GB/sec (8 GB/sec concurrent) bandwidth
- Low power consumption and power management features

Green Function

- Supports ACPI (Advanced Configuration and Power Interface)
- Supports S0 (normal), S1 (power on suspend), S3 (suspend to RAM), S4 (Suspend to disk - depends on OS), and S5 (soft - off).

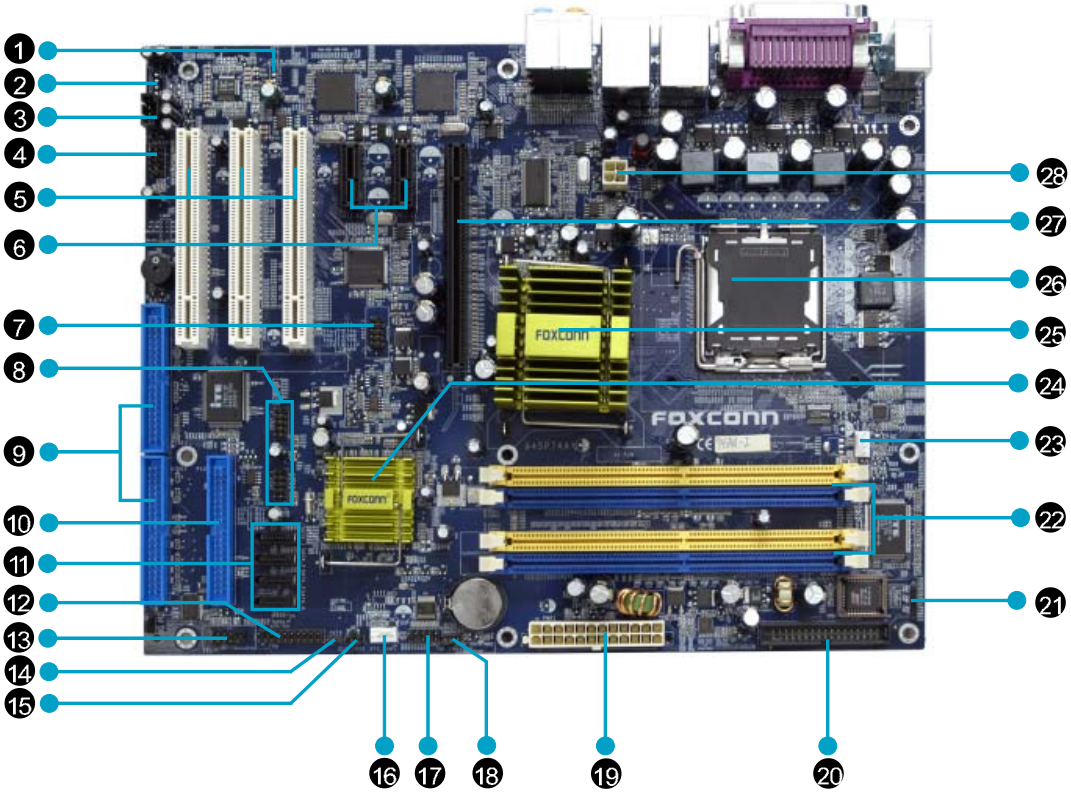
Expansion Slots

- Three PCI slots
- Two PCI Express x1 slots
- One PCI Express x16 graphics slot

Advanced Features

- PCI 2.3 specification compliant
- Supports Windows 2000/XP soft-off
- Supports Wake-on-LAN function (optional)
- Supports PC Health function (capable of monitoring system voltage, CPU/system temperature, and fan speed)

Motherboard Layout



1.SPDIF OUT Connector(optional)
2.AUX IN Connector (optional)
3.CD IN Connector
4.Front Audio Connector
5.PCI Expansion Slots
6.PCI Express x1 Slots
7.1394 Connector (optional)
8.USB Connectors
9.ATA 133/100/66/33 IDE Connectors
10.ATA 100/66/33 IDE Connector
11.Serial ATA Connectors (optional)
12.TPM Connector
13.Front Panel Connector
14.Chassis Intruder Connector
15.Clear CMOS Jumper
16.System Fan Connector
17.COM2 Connector
18.BIOS TBL Jumper
19.24-pin ATX Power Connector
20.FDD Connector
21.IrDA Connector
22.DIMM Slots
23.CPU Fan Connector
24.South Bridge: ICH7/7R
25.North Bridge: 945P
26.CPU Socket
27.PCI Express x16 Slot
28.4-pin 12V ATX Power Connector

Note: The above motherboard layout is provided for reference only; please refer to the physical motherboard.

Chapter 2

This chapter introduces the hardware installation process, including the installation of the CPU, memory, power supply, slots, rear panel and pin headers, and the mounting of jumpers. Caution should be exercised during the installation of these modules. Please refer to the motherboard layout prior to any installation and read the contents in this chapter carefully.

This chapter includes the following information:

- CPU
- Memory
- Power supply
- Rear Panel Connectors
- Other Connectors
- Expansion Slots
- Jumpers

Attention:

Take note of the following precautions before you install components or change settings.

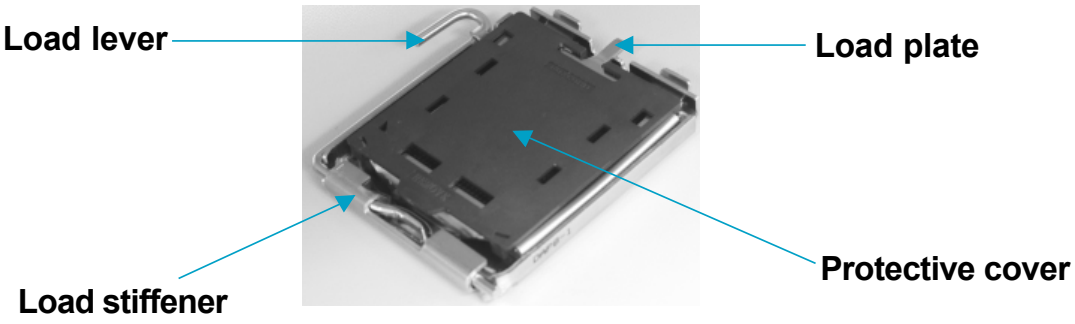
1. Use a grounded wrist strap or touch a safely grounded object, such as an attached power supply, before handling components to avoid damaging them due to static electricity.
2. Unplug the power cord before opening your chassis or touching any component.
3. Hold components by their edges to avoid touching any exposed integrated circuits (ICs).
4. Whenever you uninstall a component, place it on a grounded anti-static pad or into the anti-static bag that it came in.

CPU

This motherboard supports Smithfield, Pentium® 4, Celeron® D Processor in an LGA775 package. It also supports Hyper-Threading Technology and FSB Dynamic Bus Inversion (DBI).

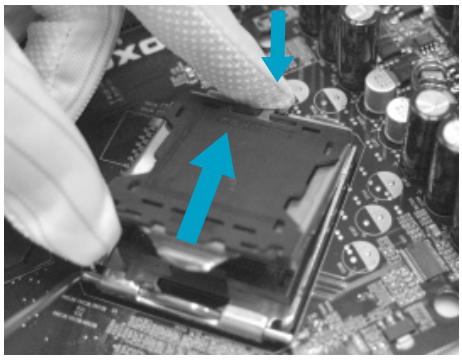
Installation of CPU

Below is the CPU socket illustration. Follow these procedures to install a CPU.

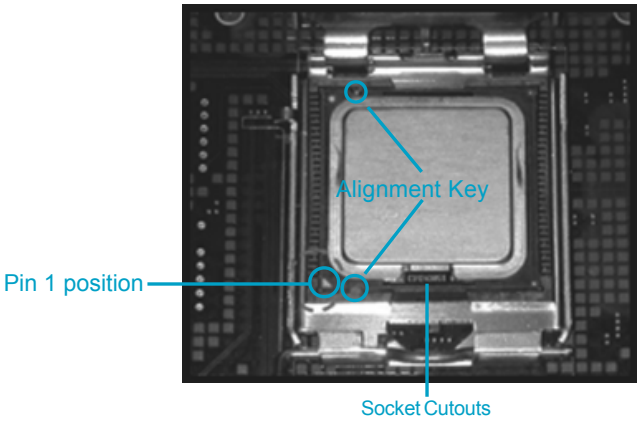


1. Use thumb and forefinger to hold the hook of the load lever and pull the lever down and away from socket to unlock it. Lift the load lever.

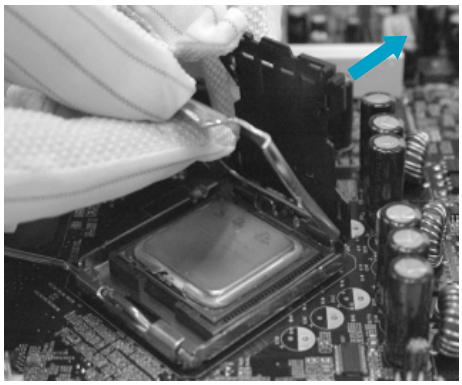
2. Push down the rear tab with your forefinger to bring the front end of the load plate up slightly. Open the load plate with thumb. Be careful not to touch the contacts.



3. Hold CPU with thumb and forefinger. Ensure fingers align to socket cutouts. Match the CPU triangle marker to Pin 1 position as shown below. The alignment key also provides the orientation directed function. Lower the CPU straight down without tilting or sliding the CPU in the socket.



4. After installing the CPU, remove the protective cover from load plate. The protective cover is used to protect the contacts of the socket. Do not discard the protective cover. Always replace the socket cover if the CPU is removed from the socket.



5. Close the load plate, and slightly push down the tongue side.

6. Lower the lever and lock it to the load plate, then the CPU is locked completely.

Warning:

Excessive temperatures will severely damage the CPU and system. Therefore, you should install CPU cooling fan and make sure that the cooling fan works normally at all times in order to prevent overheating and damaging to the CPU. Please refer to your CPU fan user guide to install it properly.

Qualified CPU Vendor List

The following table lists the CPUs that have been tested and qualified for use with this motherboard.

Vendor	Frequency	Kernel	Stepping	FSB (MHz)
Intel	2.8G	Prescott	D0	533
Intel	3.0G	Prescott	D0	800
Intel	Celeron D2.93G	Prescott	E0	533
Intel	3.2G	Prescott	D0	800
Intel	3.4G	Prescott	D0	800
Intel	3.8G	Prescott	E0	800
Intel	3.73G	Prescott		1066
Intel	3.6G	Prescott	E0	800
Intel	2.8G	Prescott	D0	800
Intel	2.66	Prescott	E0	533
Intel	3.6G	Prescott	3/	800
Intel	3.0G	Prescott	3/	800
Intel	3.4G	Prescott	3/	800
Intel	3.2G	Prescott	3/	800
Intel	2.8G	Prescott	4/	800
Intel	3.0G	Prescott	4/	800
Intel	3.2G	Prescott	4/	800

Memory

This motherboard accomodates four 240-pin DDR2 DIMM slots. These slots support 256 Mb, 512 Mb and 1 Gb DDR2 technologies for x8 and x16 devices. The available bandwidth is up to 5.3GB/s (DDR2 667) for Single-Channel mode and 10.7 GB/s (DDR2 667) in Dual-Channel Interleaved mode.

Before you install memory modules, please make sure that all DIMMs in one system are of the same type. To ensure normal operation, you must install at least one memory bank.

Memory Qualified Vendor List

The following table list is the memory modules that have been tested and qualified for use with this motherboard.

Qualified DDR2 Memory Vendor List

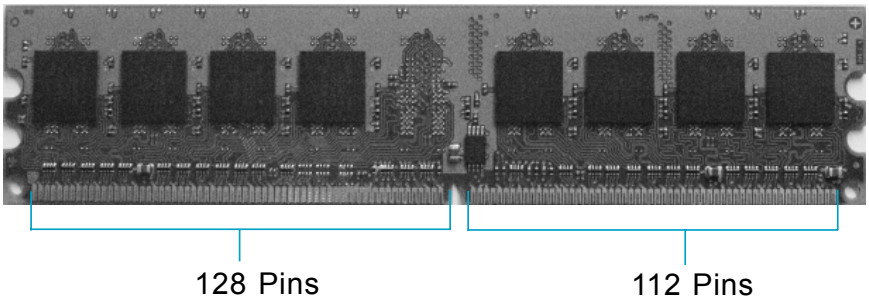
Vendor	Size	Type
APACER	1G	DDR2 533
APACER	512M	DDR2 533
CORSAIR	256M	DDR2 533
CORSAIR	256M	DDR2 675
CORSAIR	512M	DDR2 675
INFINEON	256M	DDR2 533
INFINEON	512M	DDR2 533
MT	128M	DDR2 533
MT	512M	DDR2 533
MT	512M	DDR2 675
SAMSUNG	256M	DDR2 533
SAMSUNG	512M	DDR2 533

Note:

Make sure to use the tested and qualified DDR2 modules listed above.

Installation of DDR2 Memory

1. There is only one gap in the middle of the DIMM slot, and the memory module can be fixed in one direction only. Unlock a DIMM slot by pressing the module clips outward.
2. Align the memory module to the DIMM slot, and insert the module vertically into the DIMM slot.



3. The plastic clips at both sides of the DIMM slot will lock automatically.

Warning :

Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, especially the memory devices, otherwise your motherboard or the system memory might be seriously damaged.

Power Supply

This motherboard uses an ATX power supply. In order to avoid damaging any devices, make sure that they have been installed properly prior to connecting the power supply.

4-pin ATX_12V Power Connector: PWR2

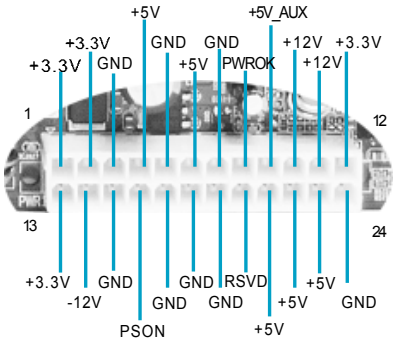
The ATX power supply connects to PWR2 and provides power to the CPU.
(For detailed location, please refer to ***Item 28*** on the motherboard layout in Chapter 1)

4-pin ATX_12V power connector

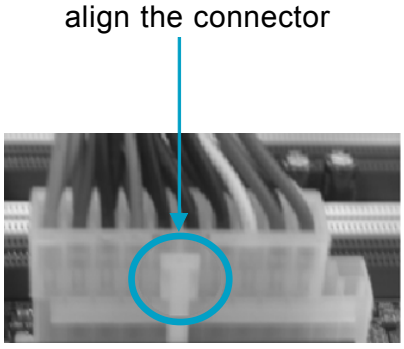
24-pin ATX power connector: PWR1

PWR1 is the ATX power supply connector. Make sure that the power supply cable and pins are properly aligned with the connector on the motherboard. Firmly plug the power supply cable into the connector and make sure it is secure.
(For detailed location, please refer to ***Item 19*** on the motherboard layout in Chapter 1)

24-pin ATX power connector



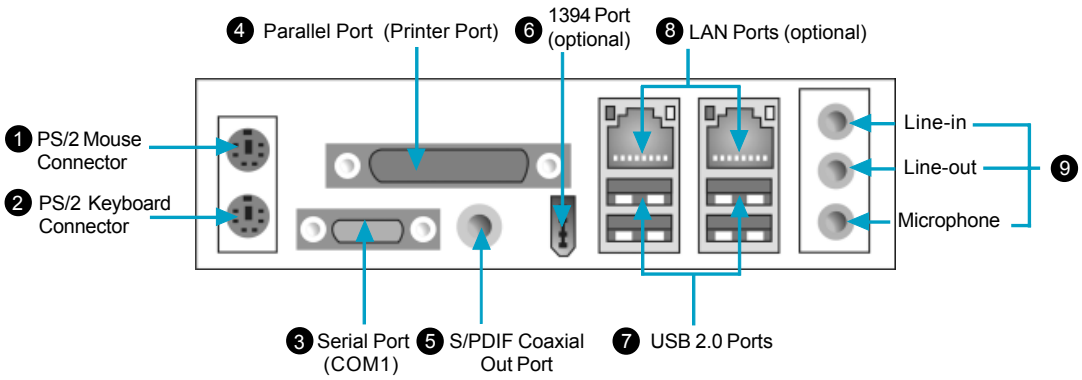
Note: We strongly recommended you use 24-pin power supply. If you want to use 20-pin power supply, you need to align the ATX power connector according to the right picture.



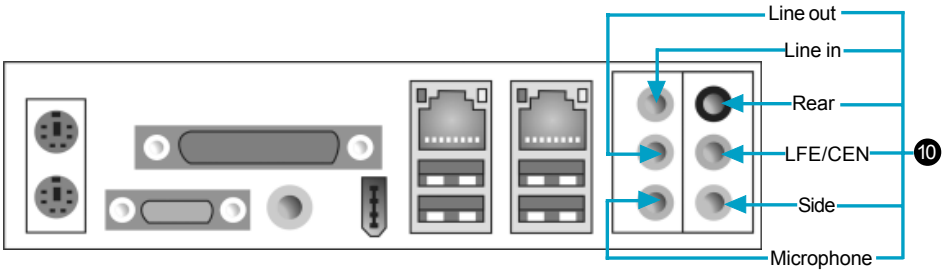
Rear Panel Connectors

This motherboard provides the ports as below:

-6 models (optional)



-8 models (optional)



❶PS/2 Mouse Connector

This green 6-pin connector is for a PS/2 mouse.

❷PS/2 Keyboard Connector

This purple 6-pin connector is for a PS/2 keyboard.

❸Serial Port (COM1)

This 9-pin COM1 port is for pointing devices or other serial devices.

❹Parallel Port (Printer Port)

This 25-pin port connects a parallel printer, a scanner, or other devices.

❺S/PDIF Coaxial Out Port

This port connects to external audio output devices with coaxial cable connectors.

❻1394 Port (optional)
This digital interface supports electronic devices such as digital cameras, scanners, and printers.

❼USB 2.0 Ports
These four Universal Serial Bus (USB) ports are available for connecting USB 2.0/1.1 devices.

❽LAN Ports (optional)
These ports allow connection to a Local Area Network (LAN) through a network hub.

❾ Line in, Line out, Microphone Jacks (for -6 models)
When using a 2-channel sound source, the Line-out jack is used to connect to speaker or headphone; the Line-in jack connects to an external CD player, tape player or other audio device. The Microphone jack is used to connect to the microphone.
When using a 6-channel sound source, connect the front speaker to the green audio output; connect the surround sound speaker to the blue audio output; connect the center speaker/subwoofer to the red Microphone output.

❿ Line in, Line out, Microphone, Rear, LEF/CEN, Side Jacks (for -8 models)

When using an 8-channel sound source, connect the front speaker to the green audio output; connect the rear sound speaker to the black audio output; connect the center speaker/subwoofer to the orange audio output; connect the side sound speaker to the grey audio output.

Other Connectors

This motherboard includes connectors for floppy devices, IDE HDD devices, Serial ATA devices, USB devices, IR module, and others.

FDD connector: FLOPPY (Refer to *Item 20* on motherboard layout in Chapter 1 for detailed location)

This motherboard includes a standard FDD connector, supporting 360 K, 720 K, 1.2 M, 1.44 M, and 2.88 M FDDs.

HDD connectors: PIDE, SIDE1/SIDE2 (Refer to *Item 10, 9* on motherboard layout in Chapter 1 for detailed location respectively)

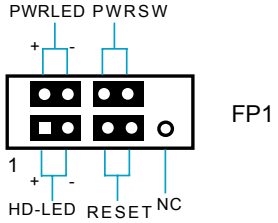
This motherboard includes one Ultra DMA 100/66/33 IDE connector (PIDE) and two Ultra DMA 133/100/66/33 IDE connectors(SIDE1, SIDE2). These connectors support the provided Ultra DMA IDE ribbon cables. We suggest you connect the cable's blue connector to the IDE connector, then connect the black connector to the master device and connect the grey connector to the slave device. The two Ultra DMA 133/100/66/33 IDE connectors support IDE RAID (You can reference the RAID MANUAL to install the IDE RAID).

Attention:

Ribbon cables are directional, therefore, make sure to always connect with the cable on the same side as pin 1 of the PIDE/SIDE1/SIDE2 or FDD connector on the motherboard.

Front Panel Connector: FP1 (Refer to *Item 13 on motherboard layout in Chapter 1* for detailed location)

This motherboard includes one connector for connecting the front panel switch and LED indicators.



IDE LED Connector (HD-LED)

The connector connects to the case's IDE indicator LED indicating the activity status of hard disks.

Reset Switch (RESET)

Attach the connector to the Reset switch on the front panel of the case; the system will restart when the switch is pressed.

Power LED Connector (PWRLED)

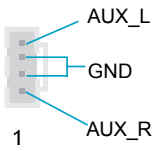
Attach the connector to the power LED on the front panel of the case. The Power LED indicates the system's status. When the system is in S0 status, the LED is on. When the system is in S1 status, the LED is blink; When the system is in S3, S4, S5 status, the LED is off.

Power Switch Connector (PWRSW)

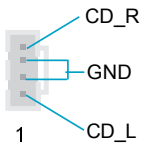
Attach the connector to the power button of the case. Pushing this switch allows the system to be turned on and off rather than using the power supply button.

Audio Connectors: AUX_IN (optional), CD_IN (Refer to *Item 2, 3* on motherboard layout in Chapter 1 for detailed location respectively)

CD_IN, AUX_IN are Sony standard CD audio connectors, they can be connected to a CD-ROM drive through a CD audio cable.



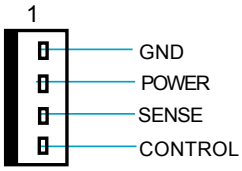
AUX_IN (optional)



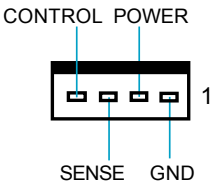
CD_IN

Fan Connectors: SYS_FAN1, CPU_FAN (Refer to *Item 16, 23* on motherboard layout in Chapter 1 for detailed location respectively)

The fan speed of CPU_FAN and SYS_FAN can be detected and viewed in "PC Health Status" section of the CMOS Setup. Connect the CPU fan/ system fan power cable to the CPU_FAN and SYS_FAN1 connectors respectively.



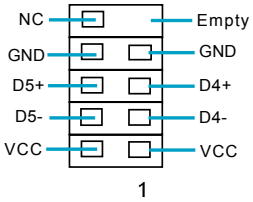
CPU_FAN



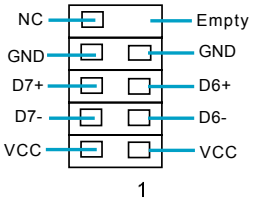
SYS_FAN1

USB Connectors: F_USB1, F_USB2（Refer to *Item 8* on motherboard layout in Chapter 1 for detailed location)

Besides four USB ports on the rear panel, the series of motherboards also have two 10-pin connectors on board which may connect to front panel USB cable(optional) to provide additional four USB ports.



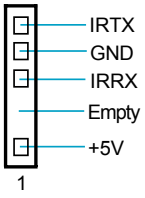
F_USB 1



F_USB 2

IrDA Connector: IR (Refer to *Item 21* on motherboard layout in Chapter 1 for detailed location)

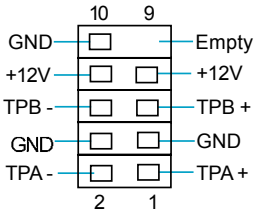
This connector supports wireless transmitting and receiving device. Before using this function, configure the settings of IR Mode from the "Integrated Peripherals" section of the CMOS Setup.



IR

1394 Connector (optional) : F_1394 (Refer to *Item 7* on motherboard layout in Chapter 1 for detailed location)

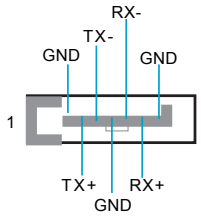
The 1394 expansion cable can be connected to either the front (provided that the front panel of your chassis is equipped with the appropriate interface) or rear panel of the chassis.



F_1394

S-ATA Connectors (optional) : SATA_1, SATA_2, SATA_3, SATA_4 (Refer to *Item 11* on motherboard layout in Chapter 1 for detailed location)

The S-ATA connector is used to connect the S-ATA device to the motherboard. These connectors support the thin Serial ATA cables for primary internal storage devices. The current Serial ATA interface allows up to 150MB/s data transfer rate.

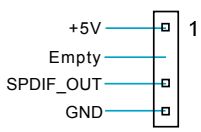


SATA_1/SATA_2/
SATA_3/SATA_4

SPDIF Out Connector (optional) : SPDIF OUT (Refer to *Item 1* on motherboard layout in Chapter 1 for detailed location)

The SPDIF out connector is capable of providing digital audio to external speak-ers or compressed AC3 data to an external Dolby digital decoder.

Note: The empty pin of SPDIF cable should be aligned to empty pin of S/PDIF out connector.

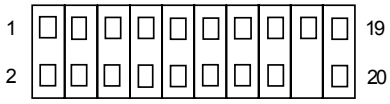


SPDIF_OUT

TPM Connector: TPM（Refer to *Item 12* on motherboard layout in Chapter 1 for detailed location)

The TPM (Trusted Platform Module) provides the ability to the PC to run applications more secure and to make transactions and communication more trustworthy. To utilize this function, you should purchase addtional devices and install the driver.

Pin	Pin Definition	Pin	Pin Definition
1	CK_33M_TPM	11	L_AD0
2	GND	12	GND
3	L_FRAMEJ	13	NC
4	Empty	14	NC
5	ICH_P_PCIRSTJ	15	NC
6	NC	16	SERIRQ
7	L_AD3	17	GND
8	L_AD2	18	GND
9	3D3V_SYS	19	LPCPDJ
10	L_AD1	20	NC

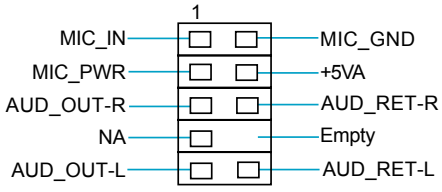


TPM

Front Audio Connector: F_AUDIO（Refer to *Item 4* on motherboard layout in Chapter 1 for detailed location)

For -6 models (optional)

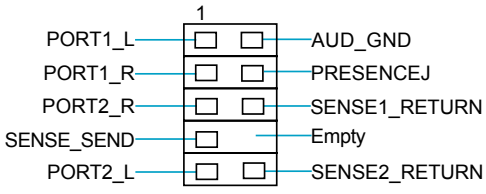
The audio connector provides two kinds of audio output choices: the Front Audio, the Rear Audio. Their priority is sequenced from high to low (Front Audio to Rear Audio). If headphones are plugged into the front panel of the chassis (using the Front Audio), then the Line-out (Rear Audio) on the rear panel will not work. If you do not want to use the Front Audio, pin 5 and 6, pin9 and 10 must be SHORT, and then the signal will be sent to the rear audio port.



F_AUDIO

For -8 models (optional)

The audio connector provides two kinds of audio output choices: the Front Audio, the Rear Audio. Front Audio supports re-tasking function. Their priority is the same.

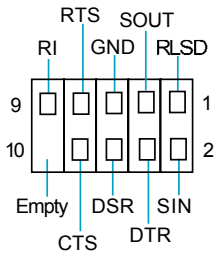


F_AUDIO

Addtional COM Connector: COM2 (Refer to *Item 17* on motherboard layout in Chapter 1 for detailed location)

This motherboard provides an additional serial COM header for your machine.

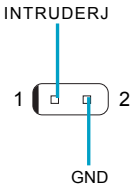
Connect one side of a switching cable to the header, then attach the serial COM device to the other side of the cable.



COM2

Chassis Intruder Connector: INTR（Refer to *Item 14* on motherboard layout in Chapter 1 for detailed location)

The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the connector has been closed once, the system will send a message. To utilize this function, set “Case Open Warning” to “Enabled” in the “PC Health Status” section of the CMOS Setup. Save and exit, then boot the operating system once to make sure this function takes effect.



INTR

Expansion Slots

This motherboard includes three 32-bit Master PCI bus slots, two PCI Express x1 slots, and one PCI Express x16 slot.

PCI Slots (Refer to *Item 5* on motherboard layout in Chapter 1 for detailed location)

The expansion card can be installed in the PCI slot. When you install or take out such card, you must make sure that the power plug has been pulled out. Please carefully read the instructions provided for such card, and install and set the necessary hardware and software for such card, such as the jumper or BIOS setup.

PCI Express Slots (Refer to *Item 6&27* on motherboard layout in Chapter 1 for detailed locations)

PCI Express will offer the following design advantages over the PCI and AGP interface:

-Compatible with existing PCI drivers and software and Operating Systems.
-High Bandwidth per Pin. Low overhead. Low latency.
-PCI Express supports a raw bit-rate of 2.5 Gb/s on the data pins. This results in a real bandwidth per pair of 250 MB/s.
-A point to point connection, allows each device to have a dedicated connection without sharing bandwidth.
-Ability to comprehend different data structure.
-Low power consumption and power management features.

PCI Express will take two forms, x16 and x1 PCI Express slots. Whereas the x16 slot is reserved for graphic/video cards, the x1 slots are designed to accommodate less bandwidth-intensive cards, such as a modem or LAN card.

The difference in bandwidth between the x16 and x1 slots are notable to be sure, with the x16 slot pushing 4GB/sec (8GB/sec concurrent) of bandwidth, and the x1 PCI Express slot offering 250 MB/sec.

Note:

If a performance graphics card was installed into x16 PCI Express slot, 2X12 pin power supply was strongly recommended since that card may be drawn 75W power.

Installing an expansion card

1. Before installing the expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation that came with it and make the necessary hardware settings for the card.
2. Remove the bracket facing the slot that you intend to use. Keep the screws for later use.
3. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
4. Secure the card to the chassis with the screw you removed earlier.

Qualified PCI Express x16 Graphics Cards Vendor List

The following table lists the PCI Express x16 graphics cards that have been tested and qualified for use with this motherboard.

PCI-E VGA Card	VGA Chip	Memory
ASD II 6600	Geforce 6600	128MB
ASD II 6200(EVGA)	Geforce 6200	128MB
ASUS	RADEON X300	128MB
ASUS EN6600GT/TD128M/A	Geforce 6600GT	128MB
ASUS EAX600XT-A1814TD	RADEON X600 XT	128MB
ASUS EAX600Pro 128	RADEON X600Pro	128MB
ASUS EN5750/A	Geforce PCX5750	128MB
ATI X800	RADEON X800SE	128MB
DOOM3	Geforce 6600GT	128MB
MSI RX600XT-VTD128E	RADEON X600XT	128MB
NVIDIAGeForce PCX5750	Geforce PCX5750	256MB
WinFast PX6600TD	Geforce 6600	128MB
WinFast PX6600GT TDH	Geforce 6600GT	128MB
WinFast PX6800GT	Geforce 6800GT	256MB
WinFast PX68000 Ultra	Geforce 6800 Ultra	256MB

Note:

Make sure to use the tested and qualified PCI Express x16 graphics cards listed above.

Jumpers

The users can change the jumper settings on this motherboard if needed. This section explains how to use the various functions of this motherboard by changing the jumper settings. Users should read the following contents carefully prior to modifying any jumper settings.

Description of Jumpers

1. For the jumpers on this motherboard, pin 1 can be identified by the silk-screen printed "△" next to it. However, in this manual, pin 1 is simply labeled as "1".
2. The following table provides some explanation of the jumper pin settings. User should refer to this when adjusting jumper settings.

Jumper	Diagram	Definition	Description
		1-2	Set pin1 and pin2 closed
		2-3	Set pin2 and pin3 closed
		Closed	Set the pin closed
		Open	Set the pin opened

Clear CMOS Jumper: CLR_CMOS (Refer to *Item 15* on motherboard layout in Chapter 1 for detailed locations)

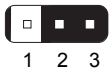
This motherboard uses the CMOS RAM to store all the set parameters. The CMOS can be cleared by removing the CMOS jumper.

How to clear CMOS?

1.Turn off the AC power supply and connect pins 1 and 2 together using the jumper cap.

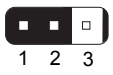
2.Return the jumper setting to the default setting (pins 2 and 3 together with the jumper cap).

3.Turn the AC power supply back on.



Normal

(Default)



Clear CMOS

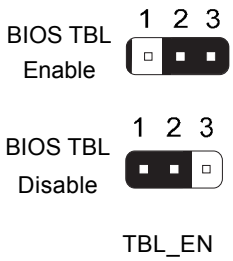
CLR_CMOS

Warning:

1. Disconnect the power cable before adjusting the jumper settings.
2. Do not clear the CMOS while the system is turned on.

BIOS TBL Jumper: TBL_EN（Refer to *Item 18* on motherboard layout in Chapter 1 for detailed locations)

The system cannot boot, if the BIOS failed to be flashed in conventional flash BIOS process. But you will have no such worry when using the BIOS TBL function, which is used to protect BIOS “Top Boot Block”. By using this function, the system still can boot even if the BIOS fails to flash. To utilize this function, you can short pin 2 and 3 with the jumper cap.



Chapter 3

This chapter tells how to change system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided.

You have to run the Setup Program when the following cases occur:

1. An error message appears on the screen during the system POST process.
2. You want to change the default CMOS settings.

This chapter includes the following information:

- Enter BIOS Setup
- Main Menu
- Standard CMOS Features
- BIOS Features
- Advanced BIOS Features
- Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PnP/PCI Configurations
- PC Health Status
- Load Fail-Safe Defaults
- Load Optimized Defaults
- Set Supervisor/User Password
- Save & Exit Setup
- Exit Without Saving

Enter BIOS Setup

The BIOS is the communication bridge between hardware and software, correctly setting up the BIOS parameters is critical to maintain optimal system performance. Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press <Del> key to enter the AWARD BIOS CMOS Setup Utility.

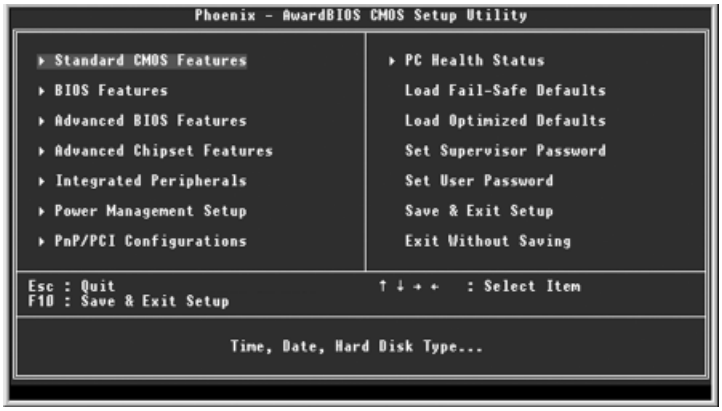
Press TAB to show POST screen, DEL to enter SETUP.

Note:

We do not suggest that you change the default parameters in the BIOS Setup, and we shall not be responsible for any damage that result from any changes that you make.

Main Menu

The main menu allows you to select from the list of setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept or go to the sub-menu.



Main Menu

The items in the main menu are explained below:

Standard CMOS Features

The basic system configuration can be set up through this menu.

BIOS Features

The special features can be set up through this menu.

Advanced BIOS Features
The advanced system features can be set up through this menu.

Advanced Chipset Features
The values for the chipset can be changed through this menu, and the system performance can be optimized.

Integrated Peripherals
Onboard peripherals can be set up through this menu.

Power Management Setup
All the items of Green function features can be set up through this menu.

PnP/PCI Configurations
The system's PnP/PCI settings and parameters can be modified through this menu.

PC Health Status
This will display the current status of your PC.

Load Fail-Safe Defaults
The fail-safe default BIOS settings can be loaded through this menu.

Load Optimized Defaults
The optimal performance settings can be loaded through this menu, however, the stable default values may be affected.

Set Supervisor/User Password
The supervisor/user password can be set up through this menu.

Save & Exit Setup
Save CMOS value settings to CMOS and exit setup.

Exit Without Saving
Abandon all CMOS value changes and exit setup.

Standard CMOS Features

This sub-menu is used to set up the standard CMOS features, such as the date, time, HDD model and so on. Use the arrow keys to select the item and set up, and then use the <PgUp> or <PgDn> keys to choose the setting values.

Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features
Date (mm:dd:yy) Mon, Dec 13 2004
Time (hh:mm:ss) 10 : 19 : 57
IDE Channel 0 Master [None]
IDE Channel 0 Slave [None]
IDE Channel 1 Master [None]
IDE Channel 1 Slave [None]
IDE Channel 2 Master [None]
IDE Channel 2 Slave [None]
Drive A [1.44M, 3.5 in.]
Drive B [None]
Video [EGA/VGA]
Halt On [All , But Keyboard]
Base Memory 640K
Extended Memory 65472K
Total Memory 1024K
Item Help
Menu Level ▸
Change the day, month, year and century
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Standard CMOS Features Menu

Date

This option allows you to set the desired date (usually as the current date) with the <day><month><date><year> format.

Day—weekday from Sun. to Sat., defined by BIOS (read-only).

Month—month from Jan. to Dec..

Date—date from 1st to 31st, can be changed using the keyboard.

Year—year, set up by users.

Time

This option allows you to set up the desired time (usually as the current time) with <hour><minute><second> format.

IDE Channel 0/1/2 Master/Slave

These categories identify the HDD types of 1 IDE channel installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and Manual. “None” means no HDD is installed or set; “Auto” means the system can auto-detect the hard disk when booting up; by choosing “Manual” and changing Access Mode to “CHS”, the related information should be entered manually. Enter the information directly from the keyboard and press < Enter>:

Cylinder	number of cylinders	Head	number of heads
Precomp	write pre-compensation	Landing Zone	landing zone
Sector	number of sectors		

Award (Phoenix) BIOS can support 3 HDD modes: CHS, LBA and Large or read Auto mode.

CHS	For HDD<528MB
LBA	For HDD>528MB & supporting LBA (Logical Block Addressing)
Large	For HDD>528MB but not supporting LBA
Auto	Recommended mode

Drive A/B

This option allows you to select the kind of FDD to be installed, including [None], [360K, 5.25 in], [1.2M, 5.25 in], [720K, 3.5 in], [1.44M, 3.5 in] and [2.88 M, 3.5 in].

Video

The following table is provided for your reference in setting the display mode for your system.

EGA/VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

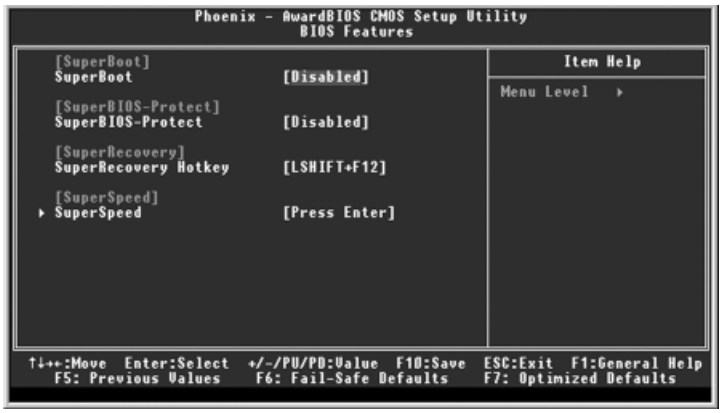
All Errors	Whenever the BIOS detects a nonfatal error, the system will stop and you will be prompted.
No Errors	The system boot will not stop for any errors that may be detected.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette	The system boot will not stop for a diskette error; but it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all other errors.

Memory

This is a Display-Only Category, determined by POST (Power On Self Test) of the BIOS.

Base Memory	The BIOS POST will determine the amount of base (or conventional) memory installed in the system.
Extended Memory	The BIOS determines how much extended memory is present during the POST.
Total Memory	Total memory of the system.

BIOS Features



BIOS Features Menu

❖ **[SuperBoot] SuperBoot (Default: Disabled)**

SuperBoot allows system-relevant information to be stored in CMOS upon the first normal start-up of your PC, and the relevant parameters will be restored to help the system start up more quickly on each subsequent start-up. The available setting values are: Disabled and Enabled.

❖ **[SuperBIOS-Protect] SuperBIOS-Protect (Default: Disabled)**

SuperBIOS-Protect function protects your PC from viruses, e.g. CIH. The available setting values are: Disabled and Enabled.

❖ **[SuperRecovery] SuperRecovery Hotkey (Default: LSHIFT+F12)**

SuperRecovery provides the users with an excellent data protection and HDD recovery function. There are 12 optional hotkeys and the default hotkey is LSHIFT+F12.

❖ **[SuperSpeed] SuperSpeed**

Press <Enter> to set the items of SuperSpeed. Setting these items are good for overclocking. Please refer to the next page.

Warning:

Be sure your selection is right. Overclocking will be dangerous! We will not be responsible for any damage caused.

Phoenix - AwardBIOS CMOS Setup Utility
SuperSpeed
Ratio Free [Disabled]
CPU Clock Ratio [14 X]
Auto Detect PCI Clk [Enabled]
Spread Spectrum [Disabled]
*** Overclock and Performance Setting ***
Overclock [Default]
Item Help
Menu Level ▸▸
Limit CPU ratio to minimum if CPU support ,and than User can furthest overclock external frequency to improve performance.
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

SuperSpeed Menu

❖**Ratio Free (Default: Disabled)**

This option is used to limit CPU ratio to minimum if CPU supports, then user can furthest overclock external frequency to improve performance.

❖**CPU Clock Ratio (Default: Depend on CPU)**

This option is used to set the ratio of an unlocked CPU.

❖**Auto Detect PCI Clk (Default: Enabled)**

This option is used to set whether the clock of an unused PCI slot will be disabled to reduce electromagnetic interference.

❖**Spread Spectrum (Default: Disabled)**

If you enable spread spectrum, it can significantly reduce the EMI (Electro-Magnetic Interference) generated by the system.

❖**Overclock (Default: Default)**

This option is used to configure the overclocking and performance setting. The available setting value are: Default, Manual, Optimal Reference.
1). “Default” indicates non-overclocking.

2). If “Manual” is selected, the following options will be activated and user can set it personally;

❖**System Memory Frequency (Default: Auto)**

This option is used to set system memory frequency.

❖**CPU Clock (Default: Depend on CPU)**

This option is used to set CPU clock.

❖**PCI Express Clock (Default: 100)**

This option is used to set PCI Express clock.

❖ **PCI Bus Clock (Default: 33.33Mhz)**
This option is used to set PCI Bus clock.

❖ **CPU Voltage Regulator (Default: Default)**
The option is used to adjust the CPU voltage.

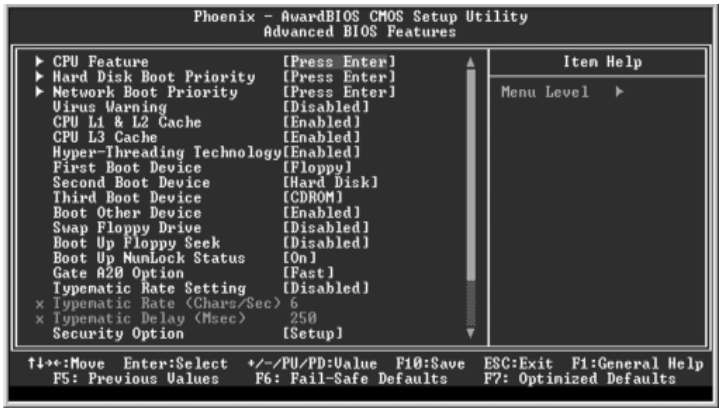
❖ **Memory Voltage (Default: Default)**
This option is used to set memory voltage.

❖ **System Core Voltage (Default: Default)**
This option is used to set system core voltage.

3). If it is set as “Optimal Reference”, Super Level will be enabled and shown.

❖ **Super Level (Default: L1)**
This option is used to set the overclock level. Frequency setting varies with the level. The higher the level goes up, the higher frequency increases.

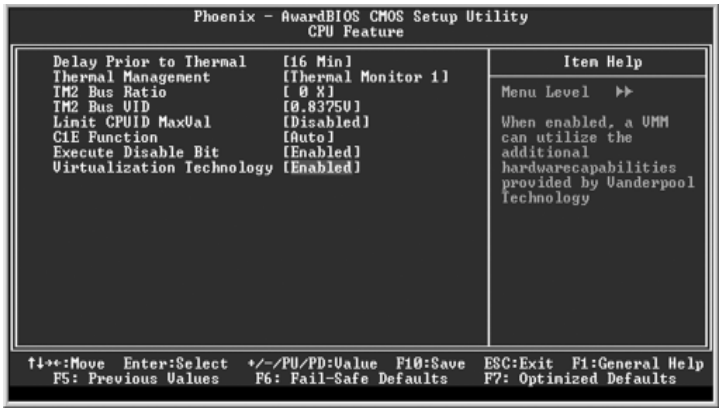
Advanced BIOS Features


Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features
CPU Feature [Press Enter]
Hard Disk Boot Priority [Press Enter]
Network Boot Priority [Press Enter]
Virus Warning [Disabled]
CPU L1 & L2 Cache [Enabled]
CPU L3 Cache [Enabled]
Hyper-Threading Technology [Enabled]
First Boot Device [Floppy]
Second Boot Device [Hard Disk]
Third Boot Device [CDROM]
Boot Other Device [Enabled]
Swap Floppy Drive [Disabled]
Boot Up Floppy Seek [Disabled]
Boot Up NumLock Status [On]
Gate A20 Option [Fast]
Typematic Rate Setting [Disabled]
x Typematic Rate (Chars/Sec) 6
x Typematic Delay (Msec) 250
Security Option [Setup]
Item Help
Menu Level ▶
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Advanced BIOS Features Menu

❖CPU Feature

Press <Enter> to enter the following screen.


Phoenix - AwardBIOS CMOS Setup Utility
CPU Feature
Delay Prior to Thermal [16 Min]
Thermal Management [Thermal Monitor 1]
IM2 Bus Ratio [0 X]
IM2 Bus VID [0.8375V]
Limit CPUID MaxVal [Disabled]
C1E Function [Auto]
Execute Disable Bit [Enabled]
Virtualization Technology [Enabled]
Item Help
Menu Level ▶▶
When enabled, a VMM can utilize the additional hardwarecapabilities provided by Vanderpool Technology
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

CPU Feature Menu

❖ Delay Prior to Thermal (Default: 16Min)

This option is used to set the delay time before the CPU enters auto thermal mode. The setting values are: 4 Min, 8 Min, 16 Min, 32 Min.

❖Thermal Management (Default: Thermal Monitor 1)

This option is used to manage Prescott CPU thermal.

❖Limit CPUID MaxVal (Default: Disabled)

The option is used to set limit CPUID MaxVal. The available setting values are: Disabled and Enabled.

❖ **Hard Disk Boot Priority**

This option is used to select the priority for HDD startup. After pressing <Enter>, you can select the HDD using the <PageUp>/<PageDn> or Up/Down arrow keys, and change the HDD priority using <+> or <->; you can exit this menu by pressing <Esc>.

❖ **Virus Warning (Default: Disabled)**

Allows you to choose the VIRUS warning feature for IDE hard disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and an alarm will beep. The setting values are: Disabled and Enabled.

Note: Such function provides protection to the start-up sector only; it does not protect the entire hard disk.

❖ **CPU L1 & L2 Cache (Default: Enabled)**

This option is used to turn on or off the CPU L1 and L2 cache. The available setting values are: Disabled and Enabled.

❖ **CPU L3 Cache (Default: Enabled) (optional)**

This option is used to turn on or off the CPU L3 cache. The available setting values are: Disabled and Enabled.

❖ **Hyper-Threading Technology (Default: Enabled)**

This option is used to turn on or off the Hyper-Threading function of the CPU. The available setting values are: Disabled and Enabled.

Note: This function will not be displayed until a CPU that supports Hyper-Threading has been installed.

❖ **First/Second/Third Boot Device (Default: Floppy/Hard Disk/CDROM)**

This option allows you to set the boot device sequence. The available setting values are: Floppy, LS120, Hard Disk, CDROM, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, LAN and Disabled.

❖ **Boot Other Device (Default: Enabled)**

With this function set to Enabled, the system will boot from some other devices if the first/second/third boot devices failed. The available setting values are: Disabled and Enabled.

❖ **Swap Floppy Drive (Default: Disabled)**

If you have two floppy diskette drives in your system, this item allows you to swap the assigned drive letters. The available setting values are: Disabled and Enabled.

❖**Boot Up Floppy Seek (Default: Disabled)**

This option controls whether the BIOS checks for a floppy drive while booting up. If it cannot detect one (either due to improper configuration or physical unavailability), it will appear an error message. The available setting values are: Disabled and Enabled.

❖**Boot Up NumLock Status (Default: On)**

This item defines if the keyboard Num Lock key is active when your system is started. The available setting values are: On and Off.

❖**Gate A20 Option (Default: Fast)**

This option is used to set up the A20 signal control necessary for access to the 1MB memory. The available setting values are: Normal and Fast.

❖**Typematic Rate Setting (Default: Disabled)**

If this item is enabled, you can use the following two items to see the typematic rate and the typematic delay settings for your keyboard. The available setting values are: Disabled and Enabled.

❖**Typematic Rate (Chars/Sec) (Default: 6)**

Use this item to define how many characters per second a held-down key generated.

❖**Typematic Delay (Msec) (Default: 250)**

Use this item to define how many milliseconds must elapse before a held-down key begins generating repeated characters.

❖**Security Option (Default: Setup)**

When it is set to “Setup”, a password is required to enter the CMOS Setup screen; When it is set to “System”, a password is required not only to enter CMOS Setup, but also to startup your PC.

❖**APIC Mode (Default: Enabled)**

This option is used to enable or disable APIC function.

❖**MPS Version Control For OS (Default: 1.4)**

This option is used to set up the version of MPS Table used in NT4.0 OS.

❖**OS Select For DRAM > 64MB (Default: Non-OS2)**

This item is only required if you have installed more than 64 MB of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default.

Advanced Chipset Features

Phoenix - AwardBIOS CMOS Setup Utility
Advanced Chipset Features
DRAM Timing Selectable [By SPD]
CAS Latency Time 3
DRAM RAS# to CAS# Delay 4
DRAM RAS# Precharge 4
Precharge dealy (tRAS) 8
System BIOS Cacheable [Enabled]
Video BIOS Cacheable [Disabled]
Memory Hole At 15M-16M [Disabled]
PCI Express Root Port Func [Press Enter]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Advanced Chipset Features Menu

❖ **DRAM Timing Selectable (Default: By SPD)**

This item determines DRAM clock/ timing using SPD or manual configuration. The available setting values are: By SPD and Manual.

❖ **CAS Latency Time (Default: depend on memory)**

This item determines CAS Latency. The available setting values are: 3, 2.5, 2 and Auto.

❖ **DRAM RAS# to CAS# Delay (Default: depend on memory)**

This item allows you to select a delay time between the CAS and RAS strobe signals. The available setting values are: 5, 4, 3, 2, and Auto.

❖ **DRAM RAS# Precharge (Default: depend on memory)**

This item allows you to select the DRAM RAS# precharge time. The available setting values are: 5, 4, 3, 2, and Auto.

❖ **Precharge delay(tRAS) (Default: depend on memory)**

This item allows you to set the precharge delay time. The available setting values are: Auto, 4 - 15.

❖ **System BIOS Cacheable (Default: Enabled)**

Select “Enabled” to allow caching of the system BIOS which may improve performance. If any other program writes to this memory area, a system error may result. The available setting values are: Enabled and Disabled.

❖**Video BIOS Cacheable (Default: Disabled)**

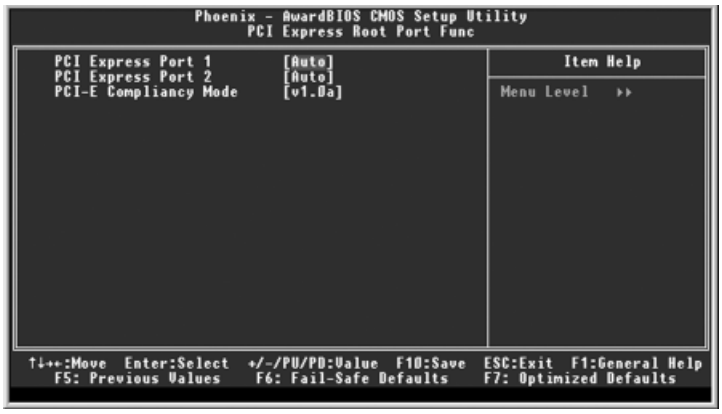
Select “Enabled” to allow caching of the Video BIOS which may improve performance. If any other program writes to this memory area, a system error may result. The available setting values are: Enabled and Disabled.

❖**Memory Hole At 15M-16M (Default: Disabled)**

This option is used to determine whether the 15M-16M address field of memory is reserved for the ISA expansion card. The available setting values are: Enabled and Disbled.

❖**PCI Express Root Port Func**

Press <Enter> to enter the following screen.


Phoenix - AwardBIOS CMOS Setup Utility
PCI Express Root Port Func
PCI Express Port 1 [Auto]
PCI Express Port 2 [Auto]
PCI-E Compliancy Mode [v1.0a]
Item Help
Menu Level ▸▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

PCI Express Root Port Func Menu

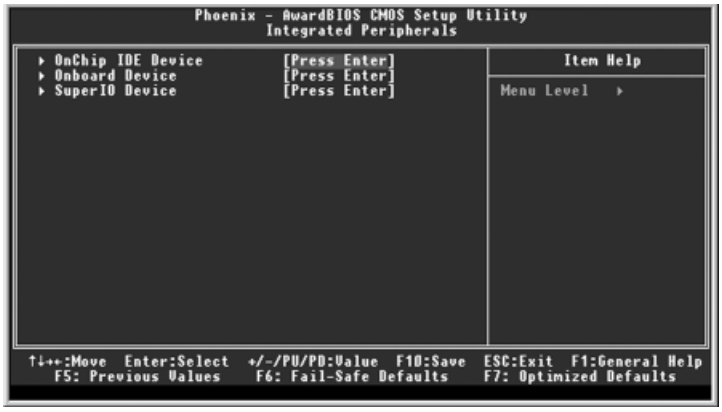
❖**PCI Express Port 1/ 2 (Default: Auto)**

This option is used to enable or disable PCI Express port 1/2. The available setting values are: Auto, Enabled, Disabled.

❖**PCI-E Compliancy Mode (Default: v1.0a)**

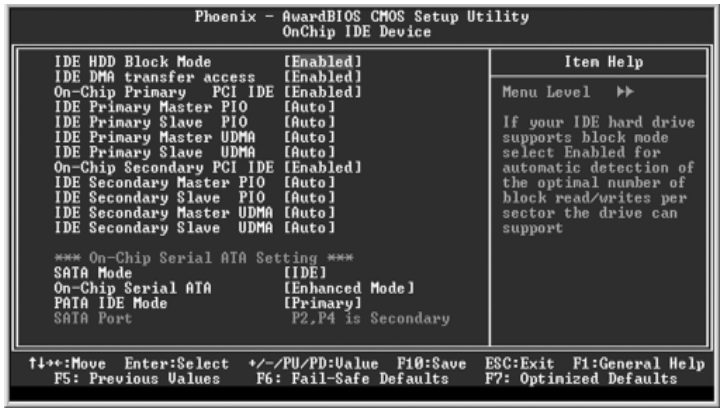
This option is used to select the PCI Express compliancy mode version. The available setting values are: v1.0a, v1.0.

Integrated Peripherals


Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals
OnChip IDE Device [Press Enter]
Onboard Device [Press Enter]
SuperIO Device [Press Enter]
Item Help
Menu Level ▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Integrated Peripherals Menu

Use the arrow keys to select your options; press the <Enter> key to enter the setup sub-menu. The options and setting methods are discussed below:


Phoenix - AwardBIOS CMOS Setup Utility
OnChip IDE Device
IDE HDD Block Mode [Enabled]
IDE DMA transfer access [Enabled]
On-Chip Primary PCI IDE [Enabled]
IDE Primary Master PIO [Auto]
IDE Primary Slave PIO [Auto]
IDE Primary Master UDMA [Auto]
IDE Primary Slave UDMA [Auto]
On-Chip Secondary PCI IDE [Enabled]
IDE Secondary Master PIO [Auto]
IDE Secondary Slave PIO [Auto]
IDE Secondary Master UDMA [Auto]
IDE Secondary Slave UDMA [Auto]
*** On-Chip Serial ATA Setting ***
SATA Mode [IDE]
On-Chip Serial ATA [Enhanced Mode]
PATA IDE Mode [Primary]
SATA Port P2,P4 is Secondary
Item Help
Menu Level ▸▸
If your IDE hard drive supports block mode select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Onchip IDE Device Menu

❖ **IDE HDD Block Mode (Default: Enabled)**

This option is used to set whether the IDE HDD block mode is allowed. The available setting values are: Disabled and Enabled.

❖ **IDE DMA transfer access (Default: Enabled)**

This option is used to set the IDE transfer access—with it set to Enabled, the IDE Transfer Access uses the DMA mode; with it set to Disabled, the IDE Transfer Access uses the PIO mode.

❖ **On-Chip Primary/Secondary PCI IDE (Default: Enabled)**

Use this item to enable or disable the Primary/Secondary PCI IDE channel that is integrated on the motherboard.

❖**IDE Primary/Secondary Master/Slave PIO (Default: Auto)**

These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE devices. Choose Auto to let the system auto detect which PIO mode is best or select a PIO mode from 0-4.

❖**IDE Primary/Secondary Master/Slave UDMA (Default: Auto)**

UltraDMA technology provides faster access to IDE devices. If you install a device that supports UltraDMA, change the appropriate item on this list to Auto. The available setting values are: Disabled and Auto.

❖**SATA Mode (Default: IDE)**

This option is used to set the Serial ATA Mode. The available setting values are: IDE, RAID, AHCI.

❖**On-Chip Serial ATA (Default: Enhanced Mode)**

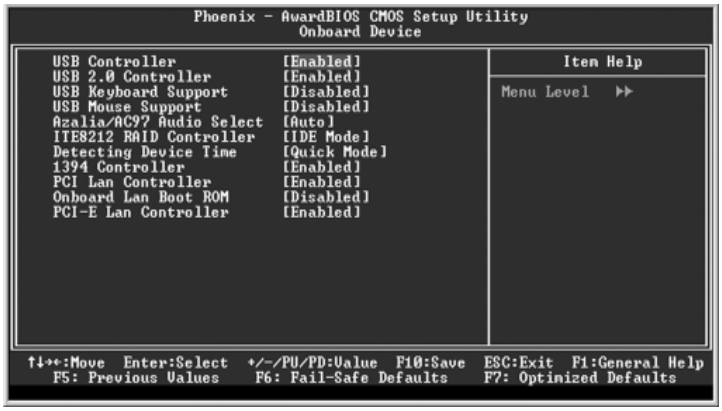
This option is used to set the On-chip Serial ATA function. When it is set to “Disabled”, the function will be disabled; when it is set to “Combined Mode”, four HDDs at most will be supported; with it set to “Enhanced Mode”, six HDDs at most will be supported (for those under Windows 2000 and Windows XP only); with it set to “SATA Only”, only the S-ATA HDD can be used.

❖**PATA IDE Mode (Default: Primary)**

When On-Chip Serial ATA set as “Combined Mode”, this option will be modified. It is used to set the PATA IDE Mode. The available setting values are: Primary, Secondary.

❖**SATA Port (Default: P2, P4 is Secondary)**

This option is used to set the Serial ATA Port.


Phoenix - AwardBIOS CMOS Setup Utility
Onboard Device
USB Controller [Enabled]
USB 2.0 Controller [Enabled]
USB Keyboard Support [Disabled]
USB Mouse Support [Disabled]
Azalia/AC97 Audio Select [Auto]
IIE8212 RAID Controller [IDE Mode]
Detecting Device Time [Quick Mode]
1394 Controller [Enabled]
PCI Lan Controller [Enabled]
Onboard Lan Boot ROM [Disabled]
PCI-E Lan Controller [Enabled]
Item Help
Menu Level ▸▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Onboard Device Menu

❖**USB Controller (Default: Enabled)**

This option is used to set whether the USB Controller is enabled. The available setting values are: Disabled and Enabled.

❖**USB 2.0 Controller (Default: Enabled)**

This option is used to set whether the USB 2.0 Controller is enabled. The available setting values are: Disabled and Enabled.

❖**USB Keyboard Support (Default: Disabled)**

This option is used to set whether the USB keyboard controller is enabled in a legacy operating system (such as DOS). The available setting values are: Disabled and Enabled.

❖**USB Mouse Support (Default: Disabled)**

This option is used to set whether the USB mouse controller is enabled in a legacy operating system (such as DOS). The available setting values are: Disabled and Enabled.

❖**Azalia/AC97 Audio Select (Default: Auto)**

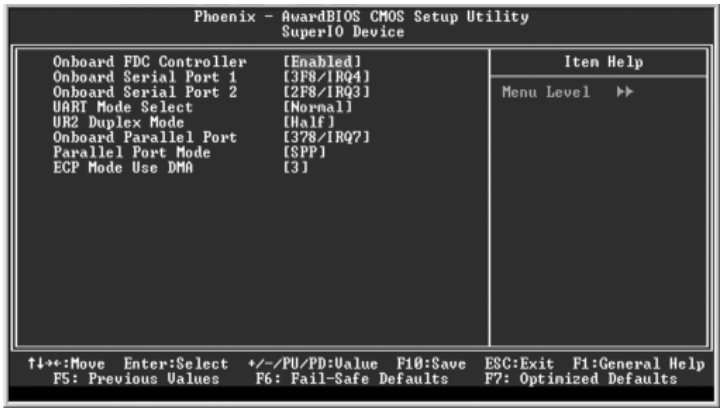
This option is used to set whether onboard Azalia/AC97 Audio is enabled. The available setting values are: Disabled and Auto.

❖**PCI LAN Controller (Default: Enabled)**

This option is used to set whether the PCI LAN controller is enabled. The available setting values are: Disabled and Enabled.

❖**Onboard Lan Boot ROM (Default: Disabled)**

This option is used to decide whether to invoke the boot ROM of the onboard LAN chip. The available setting values are: Disabled and Enabled.


Phoenix - AwardBIOS CMOS Setup Utility
SuperIO Device
Onboard FDC Controller [Enabled]
Onboard Serial Port 1 [3F8/IRQ4]
Onboard Serial Port 2 [2F8/IRQ3]
UART Mode Select [Normal]
UR2 Duplex Mode [Half]
Onboard Parallel Port [378/IRQ7]
Parallel Port Mode [SPP]
ECP Mode Use DMA [3]
Item Help
Menu Level ▸▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Super IO Device Menu

❖ **Onboard Serial Port 1/2 (Default: 3F8/IRQ4 / 2F8/IRQ3)**

This option is used to assign the I/O address and interrupt request (IRQ) for the onboard serial port 1/2. The onboard serial port 2 I/O address and IRQ is for IrDA using.

❖ **UART Mode Select (Default: Normal)**

Use this option to select the UART mode. Setting values include Normal, IrDA, ASKIR. The setting value is determined by the infrared module installed on the board.

❖ **UR2 Duplex Mode (Default:Half)**

This option is available when UART 2 mode is set to either ASKIR or IrDA. This item enables you to determine the infrared function of the onboard infrared chip.

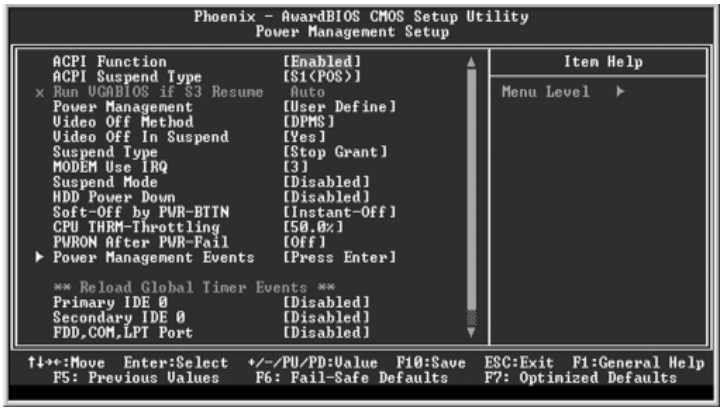
❖ **Onboad Parallel Port (Default: 378/IRQ7)**

This item allows you to determine onboard parallel port controller I/O address and interrupt request (IRQ). Setting values include Disabled, 378/IRQ7, 278/ IRQ5, and 3BC/IRQ7.

❖ **Parallel Port Mode (Default: SPP)**

Select an address and corresponding interrupt for the onboard parallel port. Setting values include SPP, EPP, ECP, ECP+EPP.

Power Management Setup


Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup
ACPI Function [Enabled]
ACPI Suspend Type [S1(POS)]
x Run VGABIOS if S3 Resume Auto
Power Management [User Define]
Video Off Method [DPMS]
Video Off In Suspend [Yes]
Suspend Type [Stop Grant]
MODEM Use IRQ [3]
Suspend Mode [Disabled]
HDD Power Down [Disabled]
Soft-Off by PWR-BTTN [Instant-Off]
CPU THRM-Throttling [50.0%]
PWRON After PWR-Fail [Off]
Power Management Events [Press Enter]
** Reload Global Timer Events **
Primary IDE 0 [Disabled]
Secondary IDE 0 [Disabled]
FDD,COM,LPT Port [Disabled]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Power Management Setup Menu

❖ **ACPI Function (Default: Enabled)**

ACPI stands for “Advanced Configuration and Power Interface”. ACPI is a standard that defines power and configuration management interfaces between an operating system and the BIOS. In other words, it is a standard that describes how computer components work together to manage system hardware. In order to use this function the ACPI specification must be supported by the OS (for example, Windows2000 or WindowsXP). The available setting values are: Enabled and Disabled.

❖ **ACPI Suspend Type (Default: S1 (POS))**

This option is used to set the energy saving mode of the ACPI function. When you select “S1 (POS)” mode, the power will not shut off and the power supply status will remain as it is. In S1 mode the computer can be resumed at any time. When you select “S3 (STR)” mode, the power will be cut off after a delay period. The status of the computer before it enters STR will be saved in memory, and the computer can quickly return to previous status when the STR function wakes. When you select “S1 & S3” mode, the system will automatically select the delay time.

❖ **Run VGABIOS if S3 Resume (Default: Auto)**

This option allows the system to initialize the VGABIOS from S3 (Suspend to RAM) sleep state when you select “S3 (STR)” mode in the above option. The available setting values are: Auto, Yes and No.

❖ **Power Management (Default: User Define)**

This option is used to set the power management scheme. The available setting values are: User Define, Min Saving, and Max Saving.

❖**Vdieo Off Method (Default: DPMS)**

This option is used to define the video off method. “Blank Screen” mode means that after the computer enters power saving mode, only the monitor will close, however, the vertical and horizontal scanning movement of the screen continues. When you select the “V/H SYNC + Blank” mode the vertical and horizontal scanning movement of screen stops when the computer enters power saving mode. “DPMS” mode is a new screen power management system, and it needs to be supported by the monitor you’re using.

❖**Video Off In Suspend (Default: Yes)**

This option is used to determine whether the video is turned off when the system enters sleep mode. The setting values are: No and Yes.

❖**Suspend Type (Default: Stop Grant)**

This option is used to set sleep mode. The setting values are Stop Grant (saves the status of the whole system and then turns off power), and PwrOn Suspend (CPU and core system go to low power mode, keeps power supply).

❖**MODEM Use IRQ (Default: 3)**

This option is used to set the IRQ in which the modem can use. The system will automatically wake up when the modem receives an incoming call.

❖**Suspend Mode (Default: Disabled)**

This option is used to set the idle time before the system enters into sleep status. The setting values are Disabled and 1 Min-1 hour.

❖**HDD Power Down (Default: Disabled)**

This option is used to turn off hard disk power if the hard disk is idle for a given period of time. The setting values are: Disabled and 1 Min-15 Min.

❖**Soft-Off by PWR-BTTN (Default: Instant-Off)**

This option is used to set the power down method. This function is only valid for systems using an ATX power supply.

When “Instant-Off” is selected, press the power switch to immediately turn off power. When “Delay 4 Sec.” is selected, press and hold the power button for four seconds to turn off power.

❖**CPU THRM-Throttling (Default: 50.0%)**

This option is used to specify the CPU speed (at percentage) to slow down the CPU when it reaches the predetermined overheat temperature. The setting values are 75.0%, 50.0%, 25.0%.

❖ **PWRON After PWR-Fail (Default: Off)**

This option is used to set what action the PC will take with the power supply when it resumes after a sudden power failure. The available options are: Off (remain in turn off status),On (auto power on) and Former-Sts (resume with the previous status).

❖ **Power Management Events**

Press <Enter> to set the items of power management events. Please refer to page 49.

❖ **Primary IDE 0/1, Secondary IDE 0/1 (Default: Disabled)**

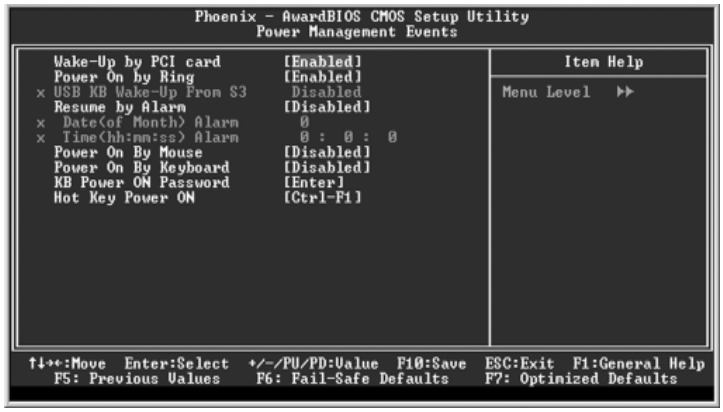
When these items are enabled, the system will restart the power saving timeout counters when any activity is detected on any of the drives or devices on the primary or secondary IDE channels. The setting values are Disabled and Enabled.

❖ **FDD, COM, LPT Port (Default: Disabled)**

When this item is enabled, the system will restart the power saving timeout counters when any activity is detected on the floppy disk drive, serial port, or the parallel port.

❖ **PCI PIRQ[A-D]# (Default: Disabled)**

When this option is disabled, any PCI device set as the Master will not power on the system.


Phoenix - AwardBIOS CMOS Setup Utility
Power Management Events
Wake-Up by PCI card [Enabled]
Power On by Ring [Enabled]
x USB KB Wake-Up From S3 Disabled
Resume by Alarm [Disabled]
x Date(of Month) Alarm 0
x Time(hh:mm:ss) Alarm 0 : 0 : 0
Power On By Mouse [Disabled]
Power On By Keyboard [Disabled]
KB Power ON Password [Enter]
Hot Key Power ON [Ctrl-F1]
Item Help
Menu Level ▸▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Power Management Events Menu

❖ **Wake-Up by PCI card (Default: Enabled)**

This option is used to set the system to wake up by PCI card. The setting values are: Disabled and Enabled.

❖ **Power On by Ring (Default: Enabled)**

If this item is enabled, it allows the system to resume from a software power down or power saving mode whenever there is an incoming call to an installed fax. This function needs to be supported by the relevant hardware and software. The setting values are: Disabled and Enabled.

❖ **USB KB Wake-Up From S3 (Default: Disabled)**

This option is used to set the system to wake up by USB equipment when it is in S3 (Suspend to RAM) mode. The setting values are: Disabled and Enabled.

❖ **Resume by Alarm (Default: Disabled)**

This option is used to set the timing of the start-up function. In order to use this function, the start-up password function must be cancelled. Also, the PC power source must not be turned off. The setting values are: Disabled and Enabled.

❖ **Date (of Month) Alarm**

When the Resume by Alarm set as “Enabled”, this option will be modified. It is used to set the timing for the start-up date. The setting values contain 0 - 31.

❖ **Time (hh:mm:ss) Alarm**

When the Resume by Alarm set as “Enabled”, this option will be modified. It is used to set the timing for the start-up time. The setting values contain hh:0 – 23; mm:0 – 59; ss:0 – 59.

❖ **Power on By Mouse (Default: Disabled)**

This option is used to set the power-on method of your PC. The available setting values are: Disabled, Mouse Move, Mouse Click.

❖ **Power On By Keyboard (Default: Disabled)**

This option is used to set the power-on method of your PC. The available setting values are: Disabled, Password, Hot KEY, Any Key, Keyboard 98.

❖ **KB Power On Password (Default: Enter)**

When the “Power On By Keyboard” is set as “Password”, use this item to set the keyboard password that powers on the system.

❖ **Hot Key Power On (Default: Ctrl - F1)**

When the “Power On By Keyboard” is set as “Hot KEY”, use this item to set the hot key combination that awakes the system. The available setting values are: Ctrl+F1-F12.

PnP/PCI Configurations

Phoenix - AwardBIOS CMOS Setup Utility
PnP/PCI Configurations
Reset Configuration Data [Disabled]
Resources Controlled By [Auto(ESCD)]
x IRQ Resources Press Enter
PCI/VGA Palette Snoop [Disabled]
INT Pin 1 Assignment [Auto]
INT Pin 2 Assignment [Auto]
INT Pin 3 Assignment [Auto]
INT Pin 4 Assignment [Auto]
INT Pin 5 Assignment [Auto]
INT Pin 6 Assignment [Auto]
INT Pin 7 Assignment [Auto]
INT Pin 8 Assignment [Auto]
** PCI Express relative items **
Maximum Payload Size [4096]
Item Help
Menu Level ▸
Default is Disabled. Select Enabled to reset Extended System Configuration Data ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

PnP/PCI Configurations Menu

❖ **Reset Configuration Data (Default: Disabled)**
This option is used to set whether the system is permitted to automatically distribute IRQ DMA and I/O addresses when each time the machine is turned on. The setting values are: Disabled and Enabled.

❖ **Resources Controlled By (Default: Auto (ESCD))**
This option is used to define the system resource control scheme. If all cards you use support PnP, then select Auto (ESCD) and the BIOS will automatically distribute interruption resources. If the ISA cards you installed do not support PnP, you will need to select “Manual” and manually adjust interruption resources in the event of hardware conflicts. However, since this motherboard has no ISA slot, this option does not apply.

❖ **IRQ Resources**
Only when the “Resoureces Controlled By” is set as “Manual” can this option be modified. Press the <Enter> key, then manually set IRQ resources.

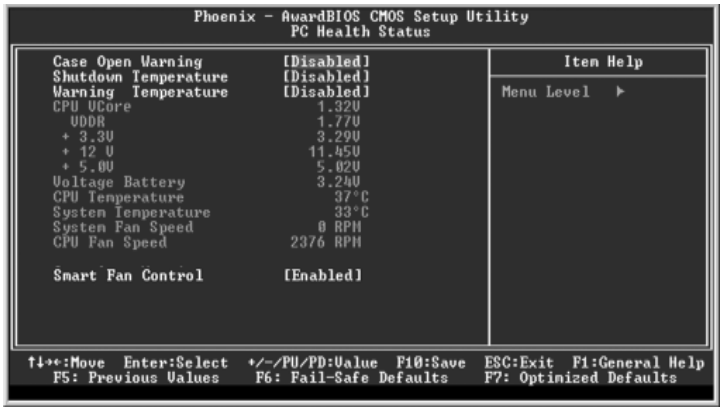
❖ **PCI/VGA Palette Snoop (Default: Disabled)**
If you use a nonstandard VGA card, use this option to solve graphic acceleration card or MPEG audio card problems (e.g., colors not accurately displayed). The setting values are: Disabled and Enabled.

❖ **INT Pin 1-8 Assignment (Default: Auto)**
This option is used to name the interrupt request (IRQ) line assigned to a device connected to the PCI interface on your system.

❖ **Maximum Payload Size (Default: 4096)**

This option is used to set maximum TLP payload size for PCI Express devices. The unit is byte. The available setting values are: 128, 256, 512, 1024, 2048, 4096.

PC Health Status



PC Health Status Menu

❖ **Case Open Warning (Default: Disabled)**

This option is used to enable or disable case open warning function. The setting values are: Disabled and Enabled.

❖ **Shutdown Temperature (Default: Disabled)**

This option is used to set the system temperature upper limit. When the temperature exceeds the setting value, the motherboard will automatically cut off power to the computer.

❖ **Warning Temperature (Default: Disabled)**

This option is used to set the warning temperature for the system. When the temperature of CPU is higher than setting value, the motherboard will send off warning information.

❖ **CPU Vcore/Vddr/+3.3 V/+12 V/5.0V (optional)**

The current voltages will be automatically detected by the system.

❖ **Voltage Battery (optional)**

This option is used to show the voltage of battery.

❖ **CPU Temperature**

The current CPU temperature will be automatically detected by the system.

❖ **System Temperature**

The current system temperature will be automatically detected by the system.

❖ **CPU Fan Speed**

The current speed of the CPU fan will be automatically detected by the system.

❖ **System Fan Speed**

The current speed of the system fan will be automatically detected by the system.

Load Fail-Safe Defaults

Press <Enter> to select this option. A dialogue box will pop up that allows you to load the default BIOS settings. Select <Y> and then press <Enter> to load the defaults. Select <N> and press <Enter> to exit without loading. The defaults set by BIOS set the basic system functions in order to ensure system stability. But if your computer cannot POST properly, you should load the fail-safe defaults to restore the original settings, then carry out failure testing. If you only want to load the defaults for a specific option, you can select the desired option and press the <F6> key.

Load Optimized Defaults

Select this option and press <Enter>, and a dialogue box will pop up to let you load the optimized BIOS default settings. Select <Y> and then press <Enter> to load the optimized defaults. Select <N> and press <Enter> to exit without loading. The defaults set by BIOS are the optimized performance parameters for the system, to improve the performance of your system components. However, if the optimized performance parameters are not supported by your hardware devices, it will likely cause system reliability and stability issues. If you only want to load the optimized default for a specific option, select the desired option and press the <F7> key.

Set Supervisor/User Password

The access rights and permissions associated with the Supervisor password are higher than those of a regular User password. The Supervisor password can be used to start the system or modify the CMOS settings. The User password can also start the system. While the User password can be used to view the current CMOS settings, these settings cannot be modified using the User password. When you select the Set Supervisor/User Password option, the following message will appear in the center of the screen, which will help you to set the password:

Enter Password:

Enter your password, not exceeding 8 characters, then press <Enter>. The password you enter will replace any previous password. When prompted, key in the new password and press <Enter>.

If you do not want to set a password, just press <Enter> when prompted to enter a password, and in the screen the following message will appear. If no password is keyed in, any user can enter the system and view/modify the CMOS settings.

PASSWORD DISABLED!!!
Press any key to continue …

Under the menu “Advanced BIOS Features Setup”, if you select “System” from the Security Option, you will be prompted to enter a password once the system is started or whenever you want to enter the CMOS setting program. If the incorrect password is entered, you will not be permitted to continue.
Under the menu “Advanced BIOS Features Setup”, if you select “Setup” from the Security Option, you will be prompted to enter a password only when you enter the CMOS setting program.

Save & Exit Setup

When you select this option and press <Enter>, the following message will appear in the center of the screen:

SAVE to CMOS and EXIT (Y/N)?Y

Press <Y> to save your changes in CMOS and exit the program; press <N> or <ESC> to return to the main menu.

Exit Without Saving

If you select this option and press <Enter>, the following message will appear in the center of the screen:

Quit Without Saving (Y/N)?N

Press <Y> to exit CMOS without saving your modifications; press <N> or <ESC> to return to the main menu.

Chapter 4

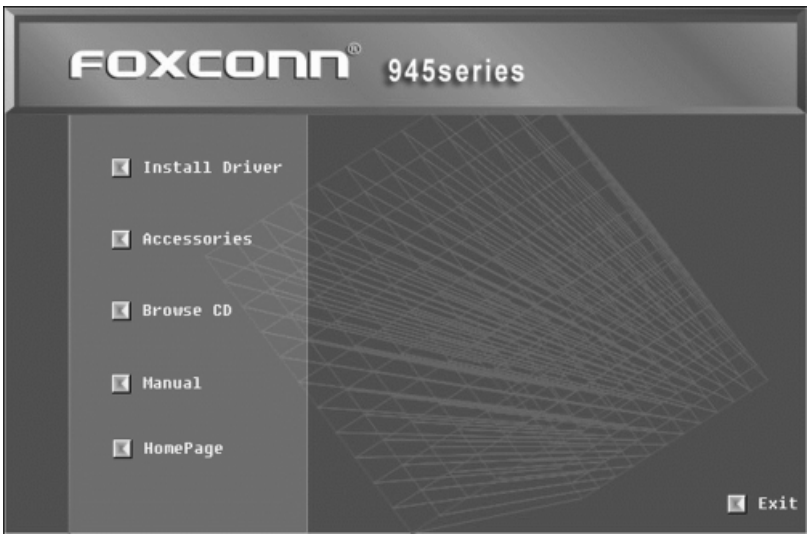
The utility CD that came with the motherboard contains useful software and several utility drivers that enhance the motherboard features.

This chapter includes the following information:

- Utility CD content
- Start to install drivers

Utility CD content

This motherboard comes with one Utility CD. To begin using the CD, simply insert the CD into your CD-ROM drive. The CD will automatically displays the main menu screen.



1. Install Drivers

Using this choice, you can install all the drivers for your motherboard. You should install the drivers in order, and you need to restart your computer after the drivers are all installed.

A. Chipset Software
B. IMSM Driver (optional)
C. ITE RAID Driver (optional)
D. DirectX 9.0c
E. Audio Driver
F. LAN 1000M Driver (optional)
G. LAN 100M Driver (optional)
H. USB2.0 Driver

2. Accessories

Use this option to install additional software programs.

A. SuperUtility
B. Adobe Reader
C. Norton Internet Security
D. Word Perfect Office 12

3. Browse CD

Click here to browse CD content.

4. Manual

Click here to view multilingual user manual & RAID manual content.

5. Homepage

Click here to visit Foxconn motherboard homepage.

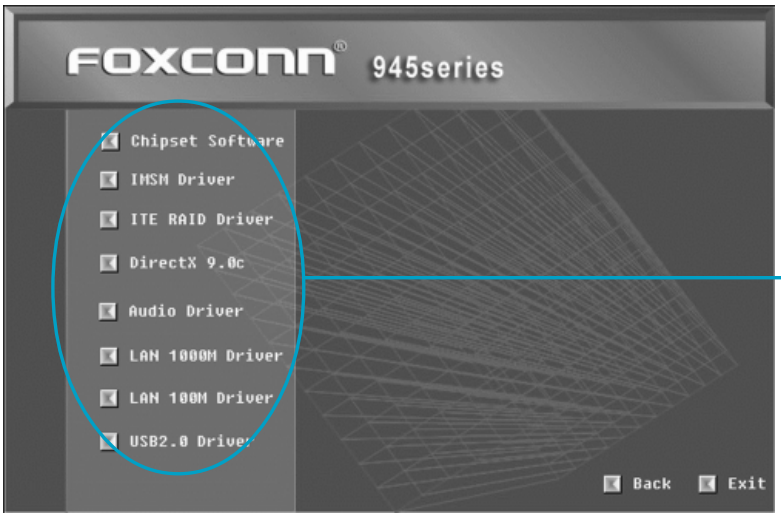
Note:

1. Install the latest patch first if your OS is Windows XP or Windows 2000.
2. Follow the CD screen order to install your motherboard drivers.

Start to install drivers

Install Drivers

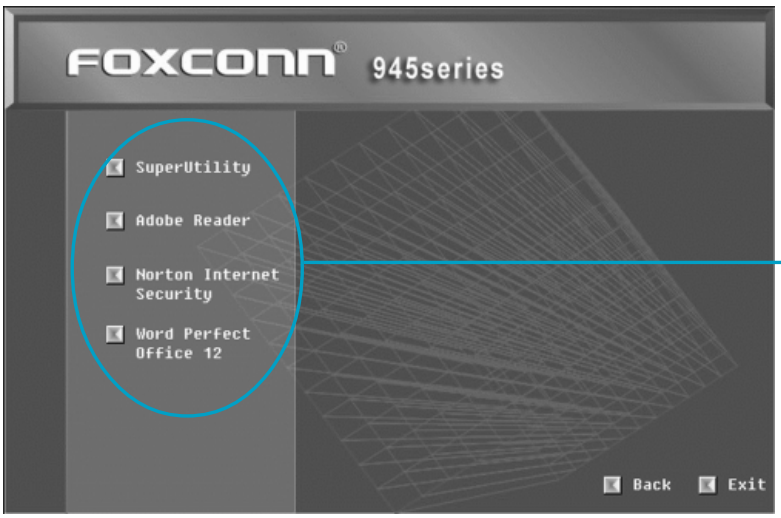
Select <Install Driver>, and click to enter the install driver screen. You can select the driver that you want to install and begin the setup steps.



Follow the screen order to install the drivers

Install Accessories

From the main menu screen, select <Accessories> (shown as below), then follow the screen sequence to install the accessry software.



Chapter 5

This chapter will introduce how to use attached software.

This chapter includes the following information:

- SuperStep
- SuperUpdate
- SuperLogo

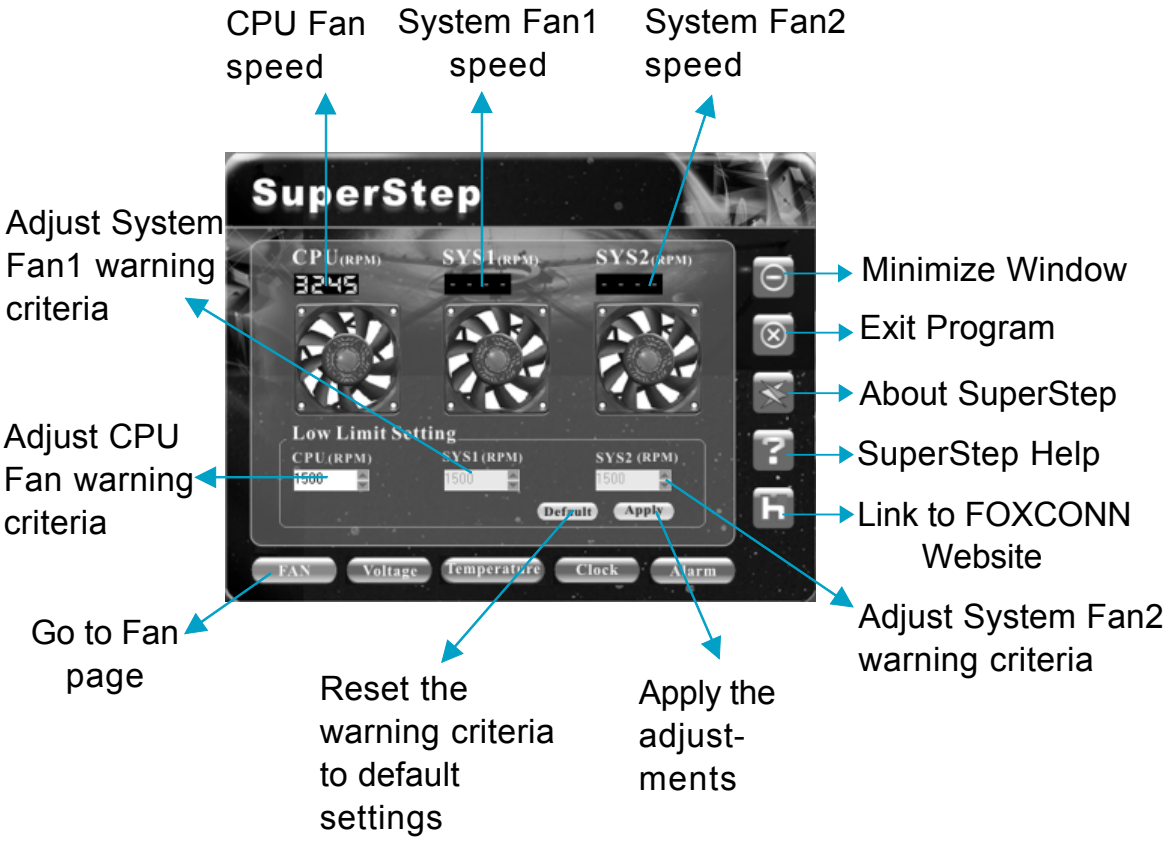
SuperStep

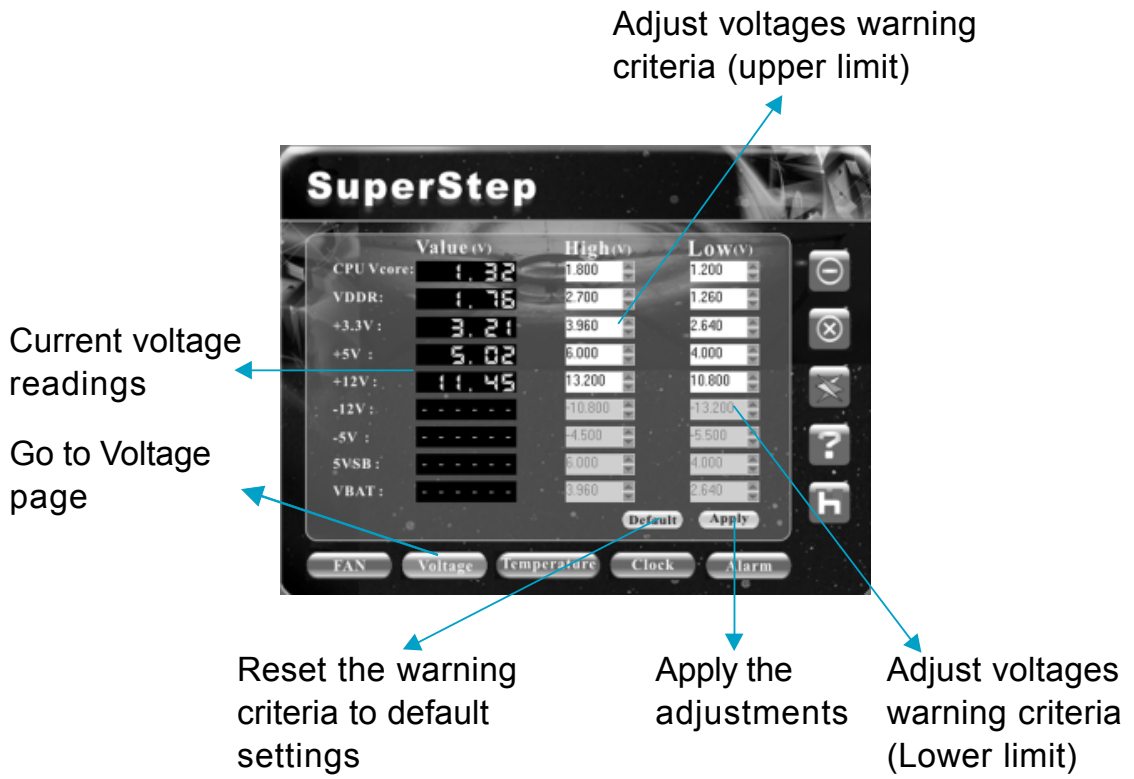
SuperStep is a utility that allows users to change the frequency of the CPU. It also displays system health introduction including CPU temperature, CPU voltage, and PCI/PCI Express clock.

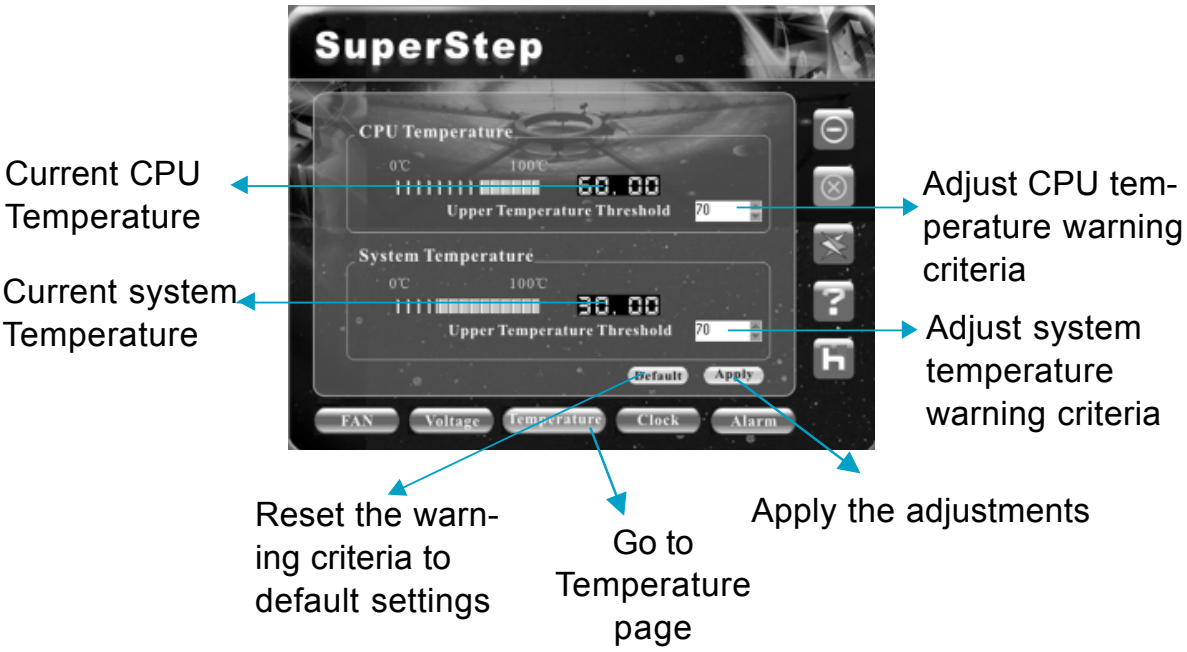
SuperStep features:

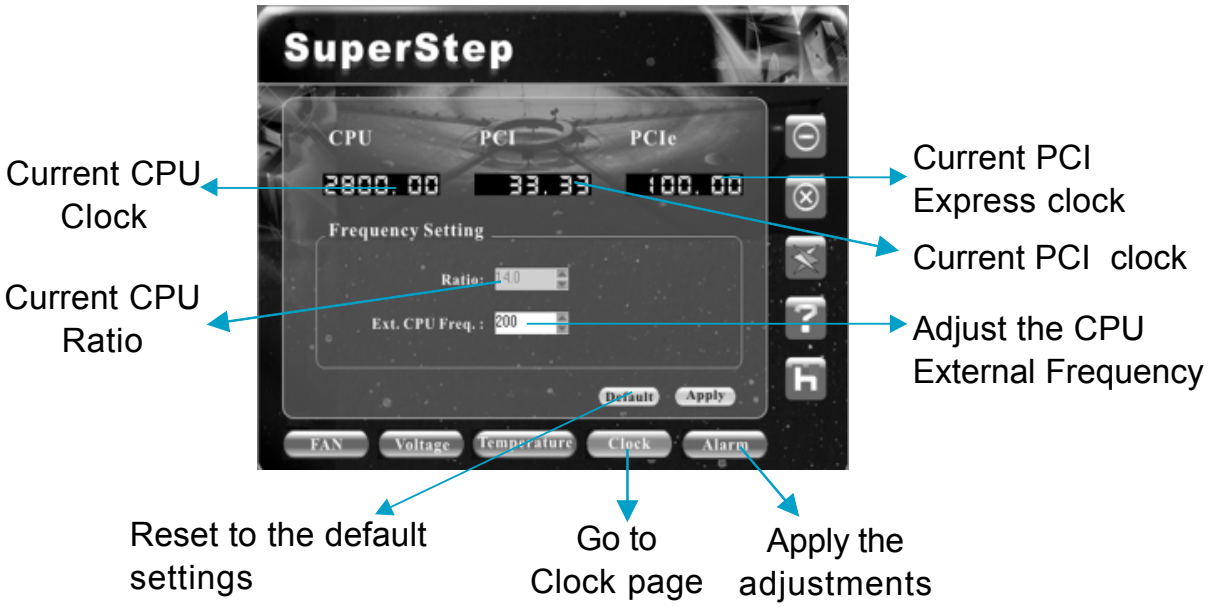
1. Supports Win2000 and WinXP.
2. Automatic alarm mechanism when system runs irregularly
3. Adjusts the CPU frequency to speed up your system and achieve better system performance.
4. Simple and easy to operate, with a user-friendly graphics interface.

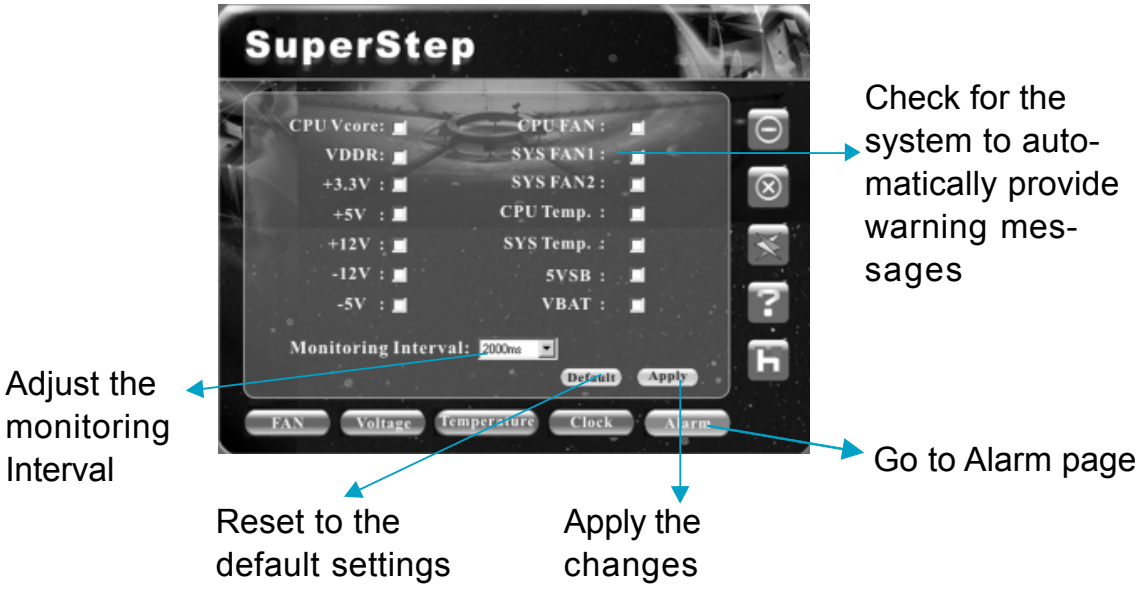
Using SuperStep:




Adjust voltages warning criteria (upper limit)
SuperStep
Value(V)
High(V)
Low(V)
CPU Vcore: 1.32 1.800 1.200
VDDR: 1.76 2.700 1.260
+3.3V: 3.21 3.960 2.640
+5V: 5.02 6.000 4.000
+12V: 11.45 13.200 10.800
-12V: 10.800 13.200
-5V: 4.500 5.500
5VSB: 5.000 4.000
VBAT: 3.960 2.640
Default
Apply
FAN
Voltage
Temperature
Clock
Alarm
Current voltage readings
Go to Voltage page
Reset the warning criteria to default settings
Apply the adjustments
Adjust voltages warning criteria (Lower limit)


SuperStep
CPU Temperature
0℃
100℃
68.00
Upper Temperature Threshold
70
System Temperature
0℃
100℃
38.00
Upper Temperature Threshold
70
Default
Apply
FAN
Voltage
Temperature
Clock
Alarm
Current CPU Temperature
Current system Temperature
Adjust CPU temperature warning criteria
Adjust system temperature warning criteria
Reset the warning criteria to default settings
Go to Temperature page
Apply the adjustments


SuperStep
CPU
PCI
PCIe
2800.00
33.33
100.00
Frequency Setting
Ratio:
Ext. CPU Freq. :
200
Default
Apply
FAN
Voltage
Temperature
Clock
Alarm
Current CPU Clock
Current CPU Ratio
Current PCI Express clock
Current PCI clock
Adjust the CPU External Frequency
Reset to the default settings
Go to Clock page
Apply the adjustments


SuperStep
CPU Vcore:
VDDR:
+3.3V :
+5V :
+12V :
-12V :
-5V :
CPU FAN :
SYS FAN1 :
SYS FAN2 :
CPU Temp. :
SYS Temp. :
5VSB :
VBAT :
Monitoring Interval:
2000ms
Default
Apply
FAN
Voltage
Temperature
Clock
Alarm
Check for the system to automatically provide warning messages
Adjust the monitoring Interval
Go to Alarm page
Reset to the default settings
Apply the changes

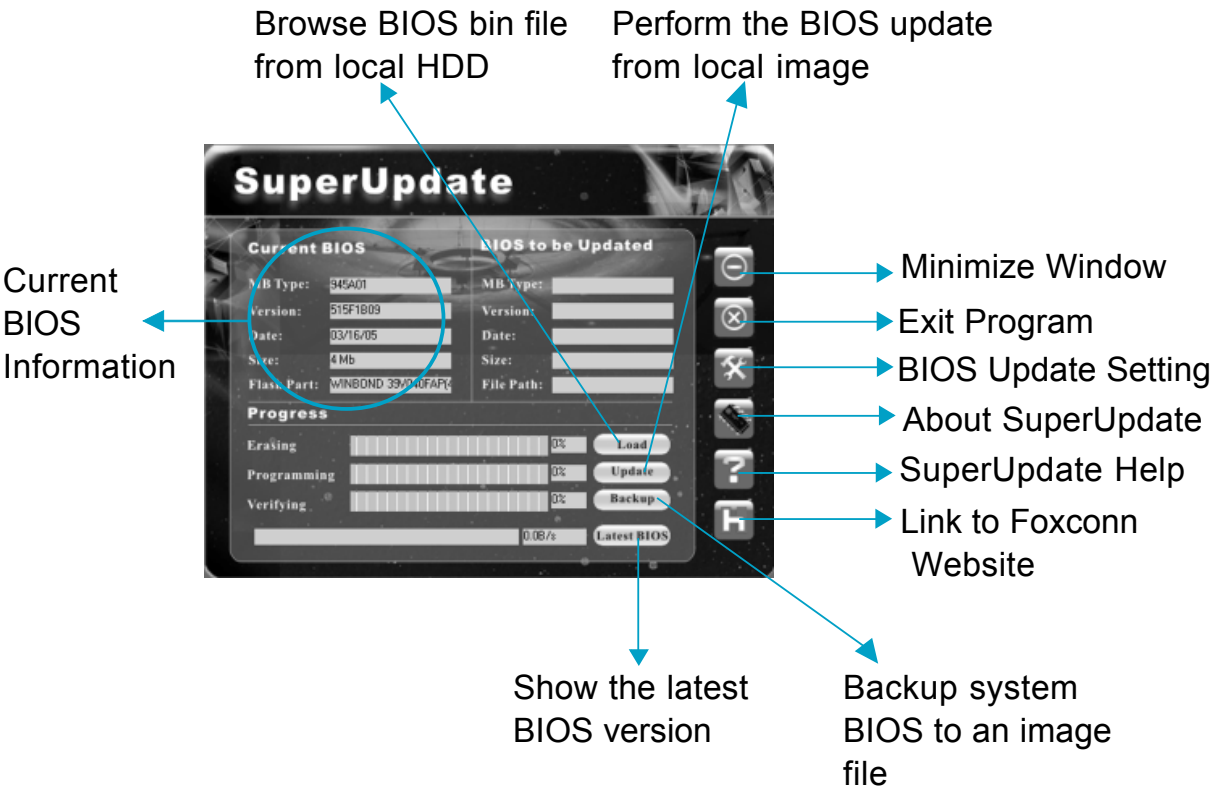
SuperUpdate

SuperUpdate is a Windows utility that allows users to backup and upgrade the system BIOS.

SuperUpdate features:

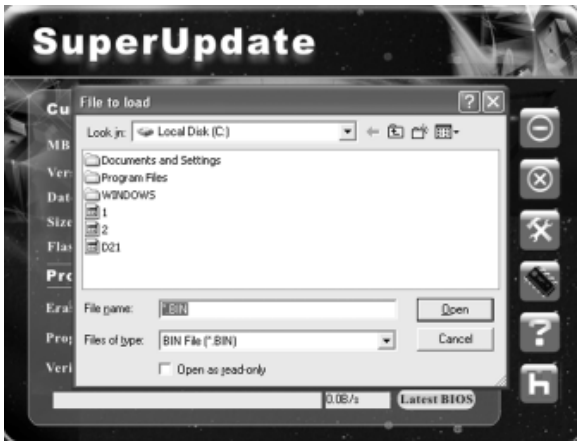
1. Supports Win2000 and WinXP.
2. Supports 4Mb size flash parts; flash write method is independent of flash type.
3. Simple and easy to operate, with a user-friendly graphics interface.

Using SuperUpdate:



Backup BIOS to local image:

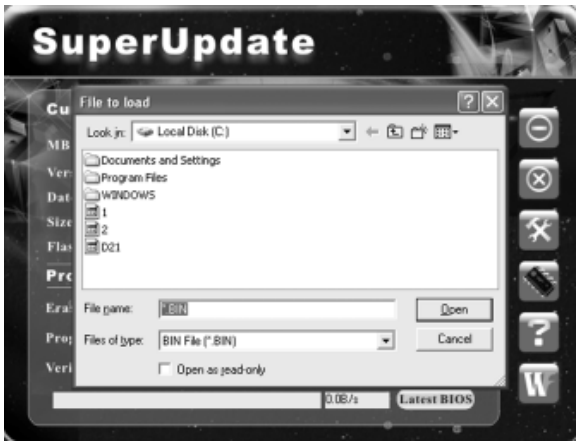
1. Click <Backup> and name your BIOS binary file to backup current BIOS.



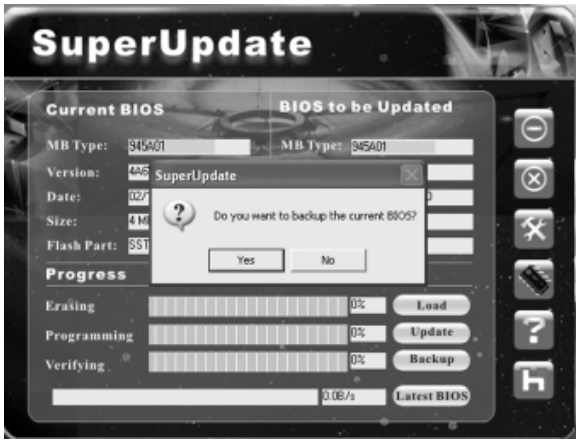
2. Click <OK> to finish the backup process.

Update BIOS from local image:

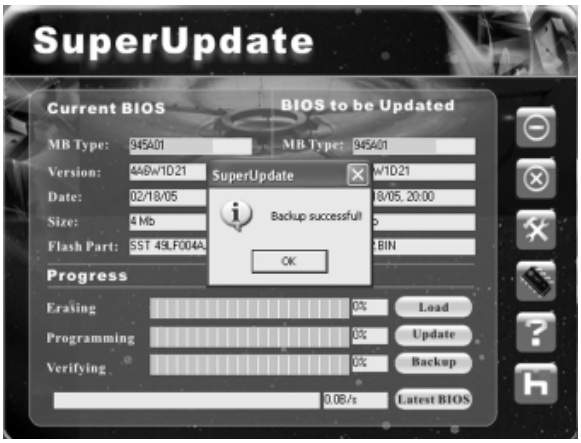
1. Click <Load> to load the BIOS file.



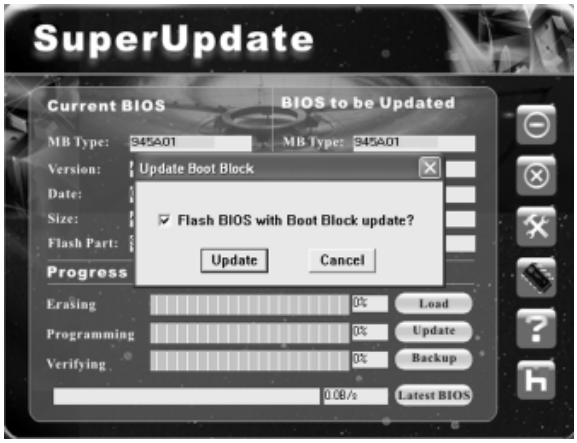
2. Click <Update>, the following message will appear.



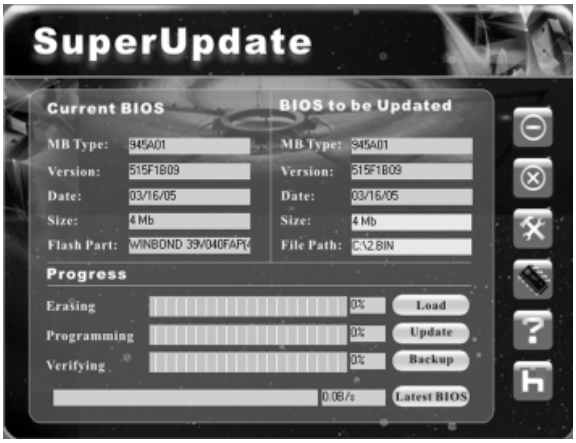
3. Click <Yes> to backup the current BIOS, then the following picture will appear.



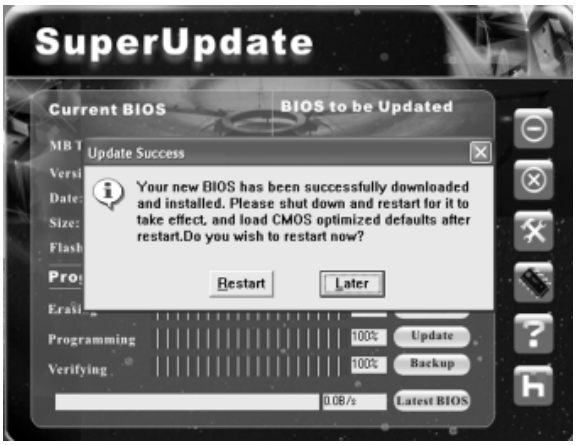
4. Click <OK >, then click <Update>.



5. Now is updating.



6. Click <Restart>.



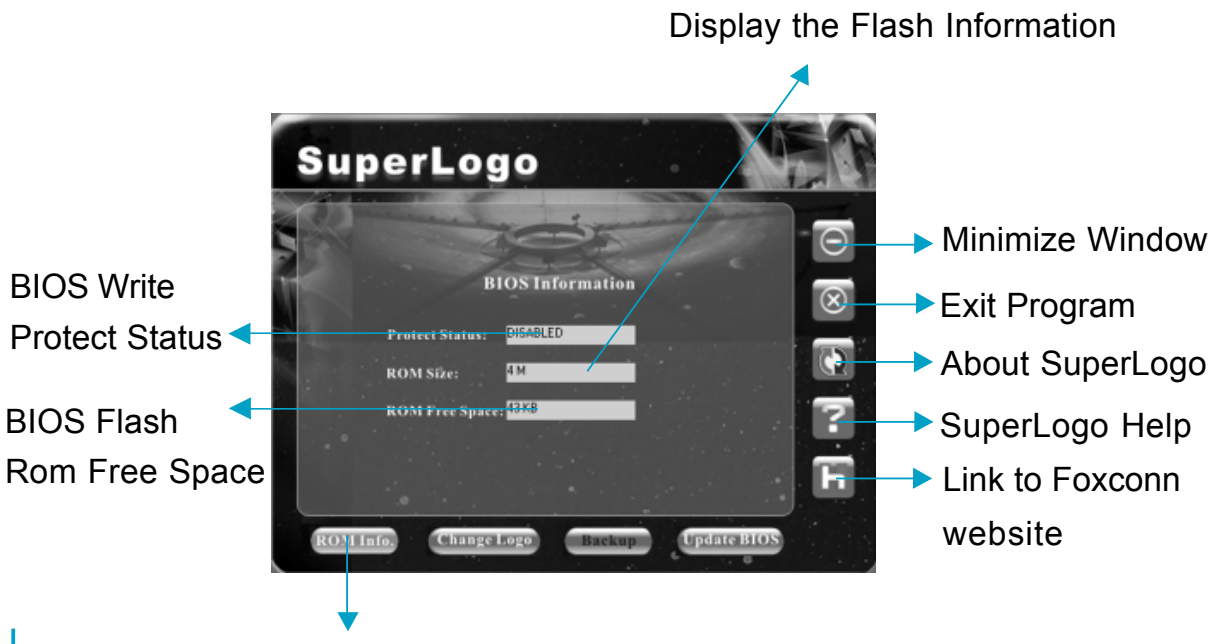
SuperLogo

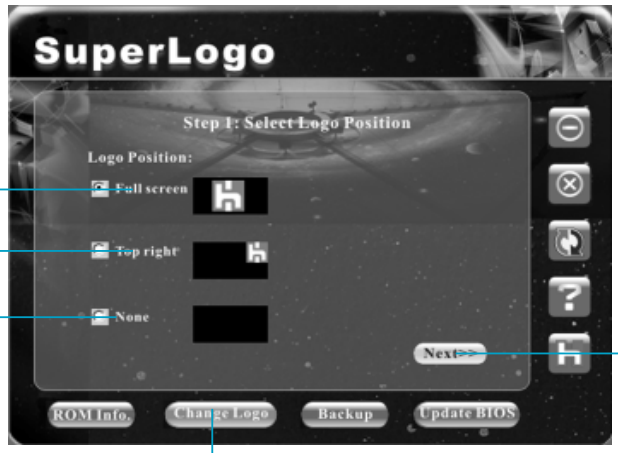
SuperLogo is a Windows utility that allows users to change the BIOS sign on logo. The utility is able to replace and backup the BIOS logo, and update and backup the BIOS image within the Windows environment.

SuperLogo features:

1. Supports Win2000 and WinXP.
2. Supports 4Mb size flash parts, flash write method is independent with flash type.
3. Simple and easy to operate, with a user-friendly graphics interface.
4. Supports BMP and JPEG graphic format files. The best color is 16 or 256 colors. The best resolution is 136 x 84 for top-right logo and 640 x 480 or 800 x 600 for full screen logo.

Using SuperLogo:





Full screen mode

Top-Right mode

Boot without logo

Follow the Wizard to complete the logo update

Go to Change Logo page

Backup whole BIOS image

Backup Logo

Follow the Wizard to complete the backup function

Go to Backup page

BIOS image file location

Browse a BIN file for updating BIOS

Go to Update BIOS page

Chapter 6

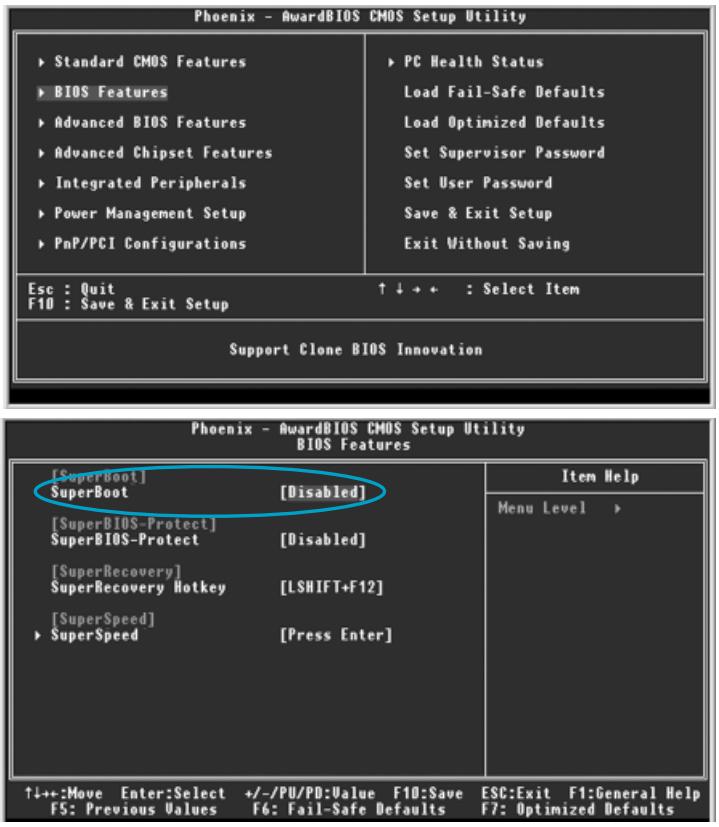
This chapter will introduce special functions of BIOS and how to use them in detail. It can further exert the max potential of motherboard to bring you super-value enjoyment.

This chapter introduces the following special functions of BIOS:

- SuperBoot
- SuperBIOS-Protect
- SuperRecovery
- SuperSpeed

SuperBoot

SuperBoot technology greatly reduces the long boot process time of computers. A BIOS without SuperBoot has to perform many routines every time when the system starts, such as checking the system core and initializing system peripherals. Now with SuperBoot, a PC can bootup without any unnecessary. SuperBoot is quite easy to use: choose the right option in CMOS setup (refer to BIOS features), SuperBoot saves the information when the PC boots up the first time, and restores the parameters for the system, thus letting the PC boot freely and rapidly.

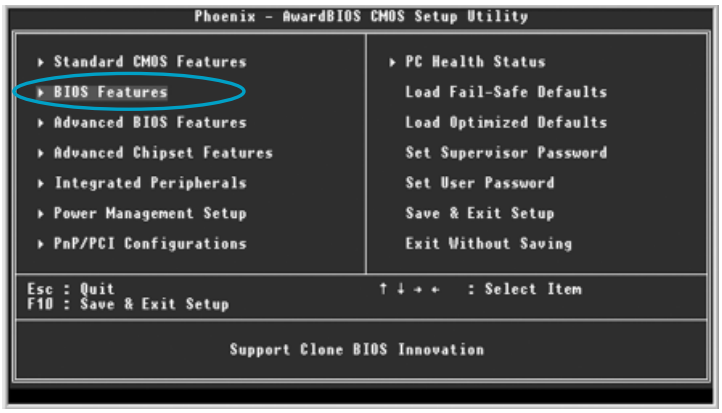


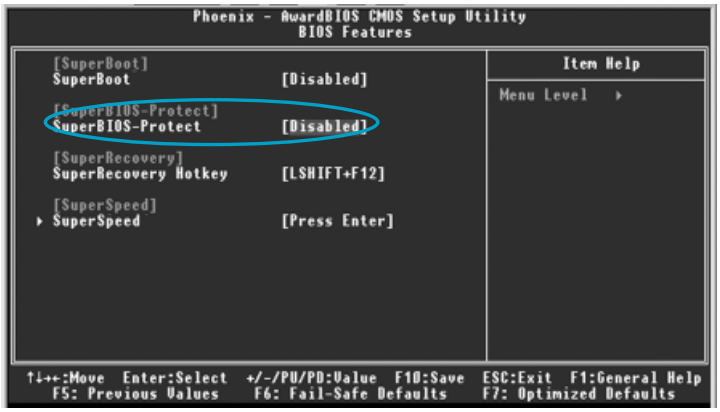
Notes:

1. If the previous boot was not completed then the BIOS will perform a normal POST, even if SuperBoot is enabled.
2. No matter whether SuperBoot is enabled or not, the BIOS will perform a normal POST if the CMOS fails.

SuperBIOS-Protect

The BIOS of the motherboard is contained inside the Flash ROM. Severe viruses, such as the CIH virus, are so dangerous that they may overwrite the BIOS. If the BIOS has been damaged, the system will be unable to boot. We provide the following solution which protects the system BIOS from being attacked by such viruses.





The way to implement this function:
Set “SuperBIOS-Protect” as “Enabled”, the BIOS will be protected.

SuperRecovery

SuperRecovery is an easy-to-operate tool for backing up or recovering your hard disk data. It offers simplified user interfaces with hotkey access and allows you to experience unprecedented high security and reliability with extra functions, such as hotkey launch, and powerful anti-virus protection.

Features:

1. Password Protection:

You can set a password for each HDD.

2. Data Protection:

Hidden partitions can only be accessed during data back up or recovery. Even reformatting the disk using FDISK or PQMAGIC will not allow access to the disk. This means that data backed up in a hidden partition is very secure.

3. Intelligent Menu:

Unavailable items will be displayed in gray. For example, if you haven't divided a hidden partition, items like "Release Hidden Partition", "Back up" and "Recovery" will be displayed in gray and can't be selected. And, when you select an item, the related information will appear on the bottom of the screen.

Disclaimer:

Please study this software program's specification carefully before using it. The vendor should not be liable for any damage arising out of or in connection with the use of this program, including liability for lost profit or data, or any other damage whatsoever.

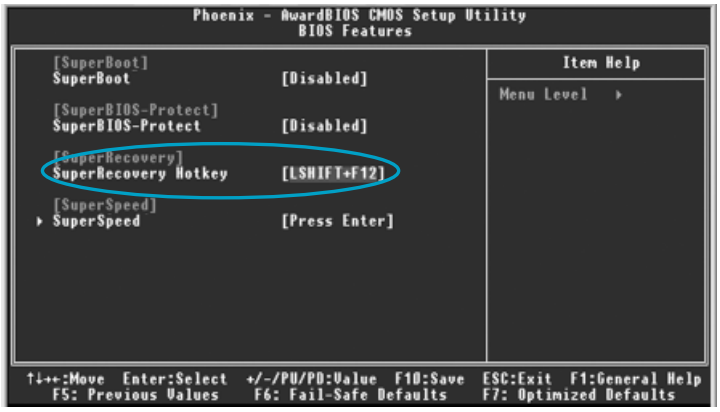
System Requirements:

1. ATA5 or above compliant IDE HDD.
2. FAT16, FAT32, NTFS files system.
3. PS/2 keyboard or USB keyboard.

Hotkey Selection:

You should enter the CMOS setup interface first by pressing <DEL> during POST (Power On Self Test). Then select the "SuperRecovery Hotkey" option to adjust the hotkey settings in the "BIOS Features" menu.

There are 12 options: LSHIFT (Left Shift)+F1~F12. LSHIFT+F12 is the default.



Hard Disk Selection:

The hard disk selection menu will be displayed after you press the hotkey, listing all the IDE HDDs installed in your system. You can switch the highlight bar to make a selection and press <Enter> to confirm it.

Attention:

1. Make sure that you have selected a HDD before entering the main menu.
2. Make sure that the HDD you selected is ATA5 or higher. For HDDs lower than ATA5, there will be a “No Support” message in the HDD list menu listing beside the name of it.
3. Only one HDD can be operated at a time.

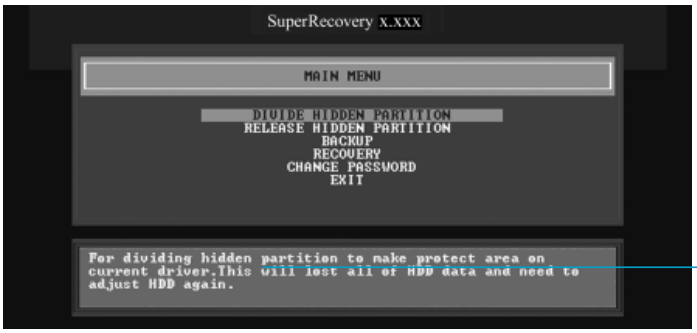
SuperRecovery x.xxx
Select an IDE Driver
[Primary Master] : MAXTOR 4K040H2
38182 MB
[Primary Slave] : No Hard Disk
[Secondary Master] : No Hard Disk
[Secondary Slave] : No Hard Disk
Use Up/Down key for moving light-bar and press ENTER key to select an IDE driver.

Note: If you have assigned a password to the selected HDD, you will be prompted to provide it before proceeding.

SuperRecovery x.xxx
Select an IDE Driver
[Primary Master] : MAXTOR 4K040H2
38182 MB
[Primary Sl
[Secondary
ENTER PASSWORD:
[Secondary Slave] : None
Use Up/Down key for moving light-bar and press ENTER key to select an IDE driver.

Main Menu:

Select a HDD to enter main menu. There are five function items, “Divide Hidden Partition”, “Release Hidden Partition”, “Backup”, “Recovery” and “Change Password”. You can switch the highlight bar to make a selection on the operation which should be performed on the HDD and confirm your selection by pressing <Enter>. The following operation will be performed on the disk you selected.


SuperRecovery X.XXX
MAIN MENU
DIVIDE HIDDEN PARTITION
RELEASE HIDDEN PARTITION
BACKUP
RECOVERY
CHANGE PASSWORD
EXIT
For dividing hidden partition to make protect area on current driver.This will lost all of HDD data and need to adjust HDD again.
On-line help message

Divide Hidden Partition:

1. What is a Hidden Partition?

SuperRecovery can be used to divide a hidden partition, which is to be reserved for backing up HDD data. The partitioning will erase all the old data saved in the HDD, to make sure that the following operations can be continued. Once the division is done, any future variation to the HDD will never affect the hidden partition, such as virus, causing turbulence, windows system breaking down or data loss. SuperRecovery can recover all the data backed up in hidden partition, letting you easily get your computer on track again.

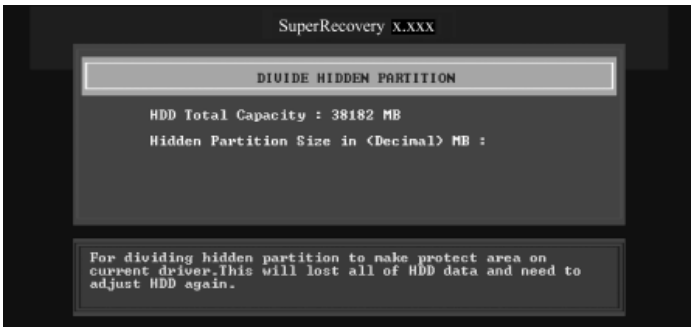
2. Divide Hidden Partition:

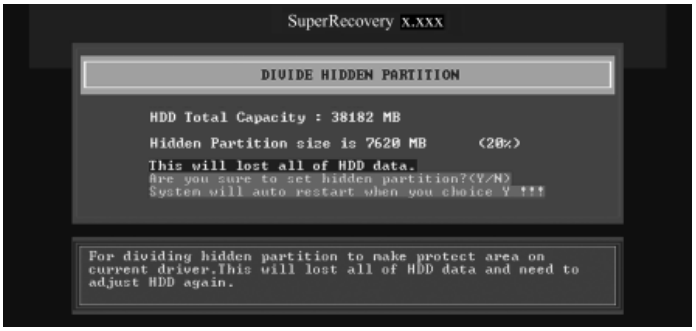
A. Enter a percentage of the HDD total capacity or an actual size in MB as the size of the hidden partition, such as “30%” or “3000”. Press <Enter> to confirm your input. As the average rate of compression is 50% or so, you are suggested to divide 30% of the total as the capacity of the hidden partition.

B. The system will then prompt you to Enter <Y> or <N> for confirmation. Press <Y> to restart the computer, and the division for hidden partition will go into effect after the system is restarted.

Attention :

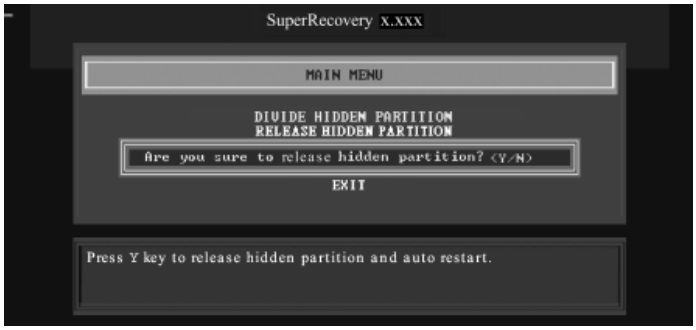
1. All the HDD data will be cleared by the partitioning process, so it is better to do the division on an empty HDD.
2. At the same time, the overall HDD capacity will decrease in order to make space for the hidden partition, which will be come unavailable for normal use.


SuperRecovery X.XXX
DIVIDE HIDDEN PARTITION
HDD Total Capacity : 38182 MB
Hidden Partition Size in <Decimal> MB :
For dividing hidden partition to make protect area on current driver.This will lost all of HDD data and need to adjust HDD again.


SuperRecovery X.XXX
DIVIDE HIDDEN PARTITION
HDD Total Capacity : 38182 MB
Hidden Partition size is 7620 MB (20%)
This will lost all of HDD data.
Are you sure to set hidden partition?(Y/N)
System will auto restart when you choice Y !!!
For dividing hidden partition to make protect area on current driver.This will lost all of HDD data and need to adjust HDD again.

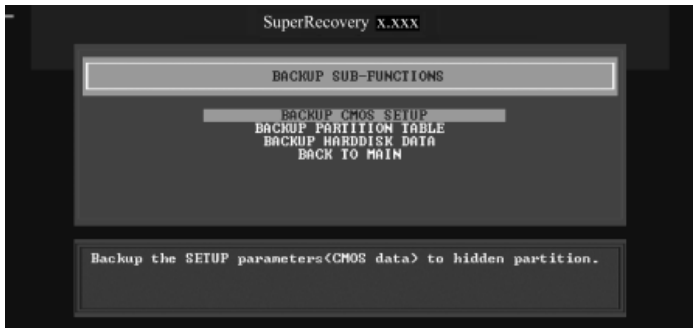
Release Hidden Partition:

This is used to release the hidden partition. If you choose this item and press <Y> to confirm, the system will be restarted to release the hidden partition. But the released partition is still unavailable for you after the system is restarted. It's necessary for you to enable it by using FDISK, PQMAGIC, or some other tools.


SuperRecovery X.XXX
MAIN MENU
DIVIDE HIDDEN PARTITION
RELEASE HIDDEN PARTITION
Are you sure to release hidden partition? (Y/N)
EXIT
Press Y key to release hidden partition and auto restart.

Backup:

Select BACKUP to enter the Backup interface, where you can find the following three sub-function items: “BACKUP CMOS SETUP”, “BACKUP PARTITION TABLE” and “BACKUP HARDDISK DATA”. Switch the highlight bar by pressing the arrow keys to make a selection and then press <Enter> to confirm your choice.



1. Backup CMOS Setup:

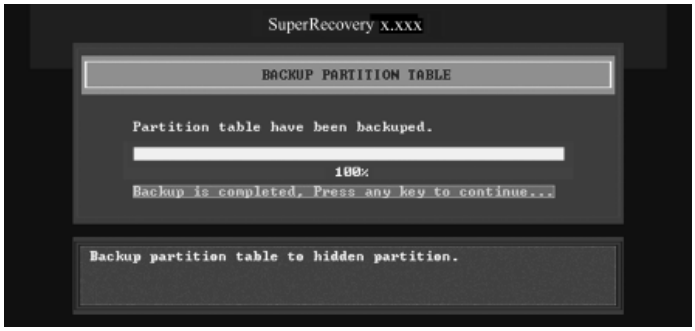
A. Support backing up of the CMOS data.

B. The backing up or recovery of CMOS data should be done on a motherboard of the same type.

SuperRecovery x.xxx
BACKUP CMOS SETUP
256 bytes of CMOS data have been finished.
Backup is completed, Press any key to continue...
Backup the SETUP parameters(CMOS data) to hidden partition.

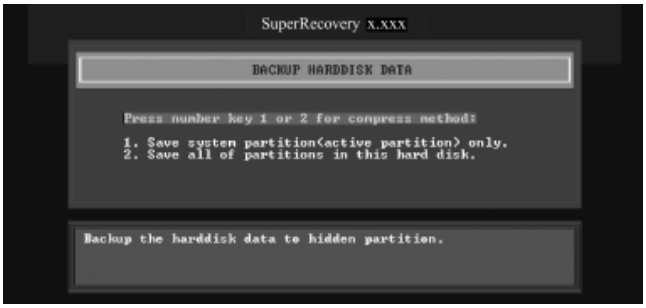
2. Backup Partition Table:

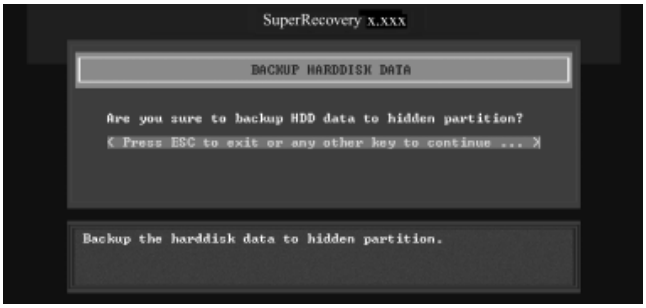
This function can help to backup all partition tables including extended partitions.


SuperRecovery x.xxx
BACKUP PARTITION TABLE
Partition table have been backuped.
100%
Backup is completed, Press any key to continue...
Backup partition table to hidden partition.

3. Backup Hard disk Data:

A. If there are active partitions (system partition), you can choose to backup an active partition or the whole disk. But only one can be taken between the two choices. Old data will be replaced by the newly backed up data.


SuperRecovery x.xxx
BACKUP HARDDISK DATA
Press number key 1 or 2 for compress method:
1. Save system partition(active partition) only.
2. Save all of partitions in this hard disk.
Backup the harddisk data to hidden partition.


SuperRecovery x.xxx
BACKUP HARDDISK DATA
Are you sure to backup HDD data to hidden partition?
(Press ESC to exit or any other key to continue ...)
Backup the harddisk data to hidden partition.

B. Backing up with the progress bar showing.

C. A report with all the critical data on this operation will be displayed after the backup is completed.

Original Size:	The data size loaded in selected partition;
Valid Size:	The size of valid data.
Elapsed Time:	How long the procession cost.
Compressed Size:	The size of data after compression.
Compressed Rate:	Compressed Size/Valid Size.

SuperRecovery X.XXX
BACKUP HARDDISK DATA
Original Size : 2033955KB
Valid Size : 17814KB
Elapsed Time : 0:0:6
Compressed Size : 1051KB
Compressed Rate : 5x
Backup is completed, Press any key to continue...
Backup the harddisk data to hidden partition.

4. Back to Main:

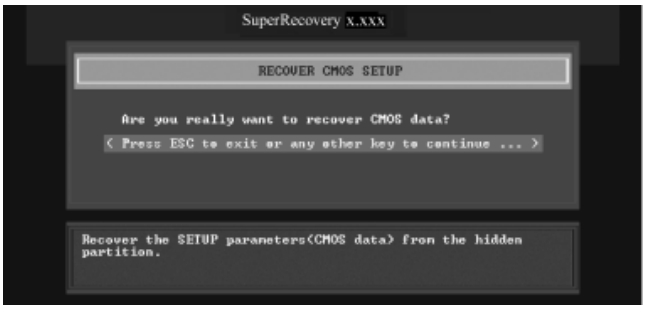
This item is used to exit the Backup interface.

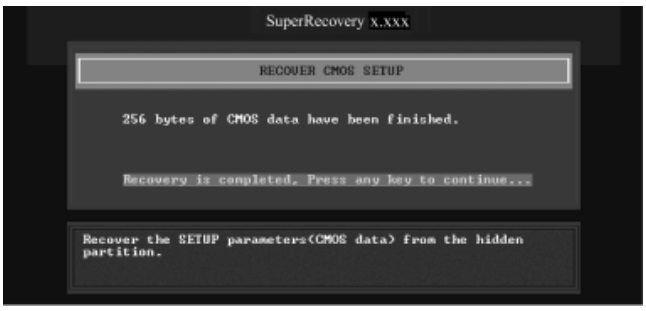
Recovery:

Select RECOVERY to enter the Recovery interface. You will see the following sub-function items: RECOVER CMOS SETUP, RECOVER PARTITION TABLE and RECOVER HARDDISK DATA. You can switch the highlight bar by pressing the arrow keys to make a selection and press <Enter> to confirm your selection.

1. Recover CMOS Setup:

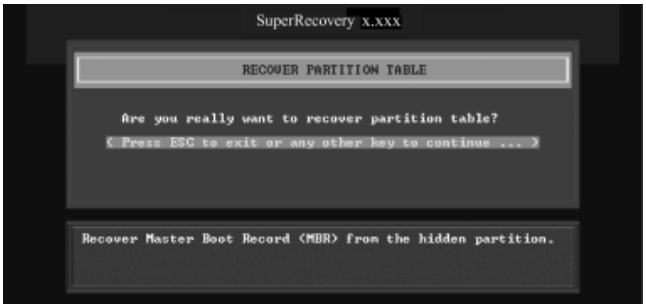
This function is used to restore the latest backup of CMOS settings you made.

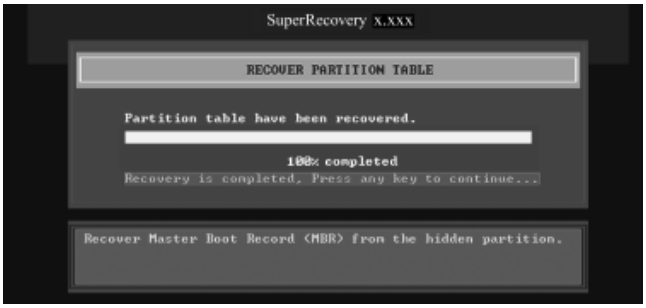




2. Recover Partition Table:

This function is used to recover all partition tables including extended partitions.





3. Recover Hard disk Data:

This item is used to restore the backed up data from the hidden partition.

4. Back to Main:

This item is used to exit the Recovery interface.

CHANGE PASSWORD Introduction:

Select CHANGE PASSWORD to enter the Change Password interface.

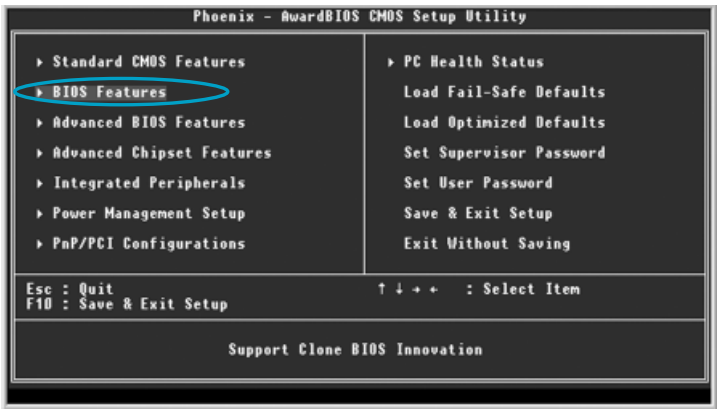
A. Enter the old password first. Press <Enter> if password is null.
B. Enter the new password. Then enter the same again to confirm it.
C. Press <Enter> for null password.
D. The password will be saved in the hidden partition.

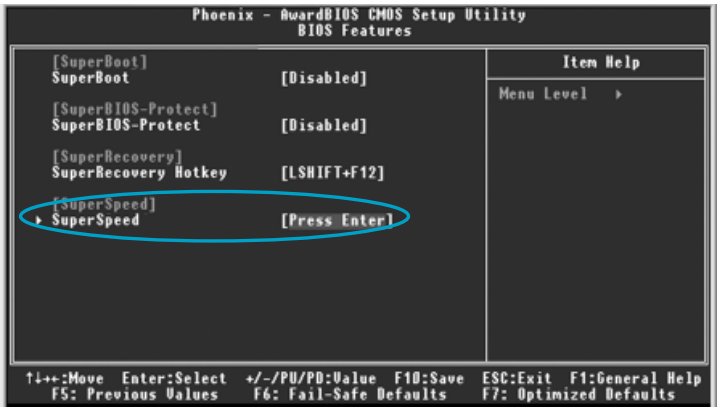
SuperSpeed

SuperSpeed is a powerful and efficient easy technology for PC DIY fans. It offers a friendly interface. Users can set the CPU Clock easily in the BIOS setup.

Procedures:

1. Correctly install your CPU.
2. Plug in other configurations and restore the system.
3. Switch on power to the system and press the <Del> key to enter BIOS Setup.
4. Enter the <BIOS Features> menu to set the CPU clock.
5. Save and exit BIOS Setup; your system will now boot successfully.





BIOS provides you with a set of basic values for your processor selection instead of the jumper settings. The processor speed can be manually set from the <BIOS Features> menu screen.

Warning:

Be sure your selection is right. CPU overclock can be dangerous! We will not be responsible for any damage caused.

Using 8-channel Audio (optional)

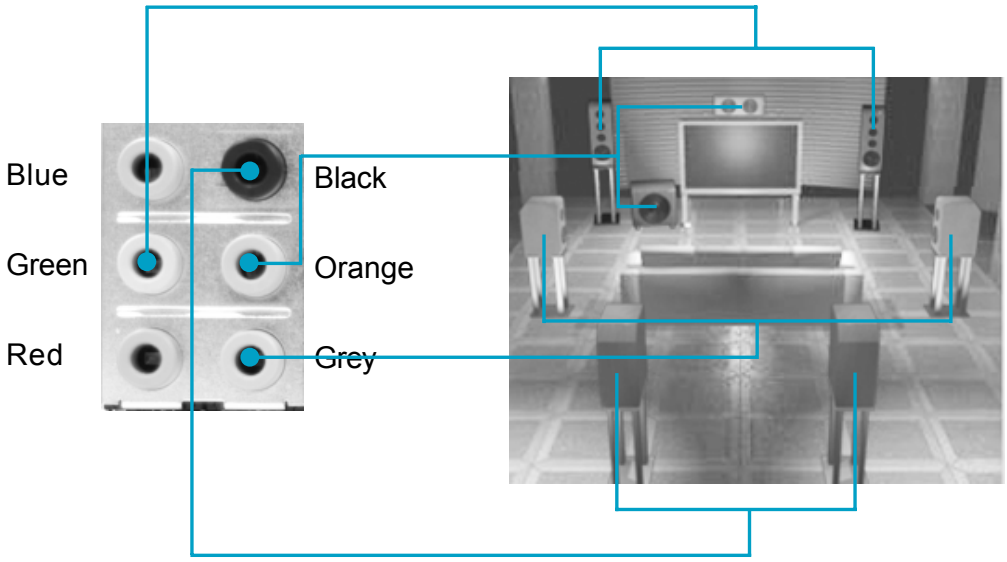
1. Introduction

8-channel audio is the highest surround sound standard available adding two speakers over existing 6-channel audio set-ups. 8-channel surround sound is already a standard feature for premium consumer audio devices, so it only makes sense that as users increasingly use their PCs to listen to the latest multimedia content that 8-channel support makes the migration as a standard PC feature.

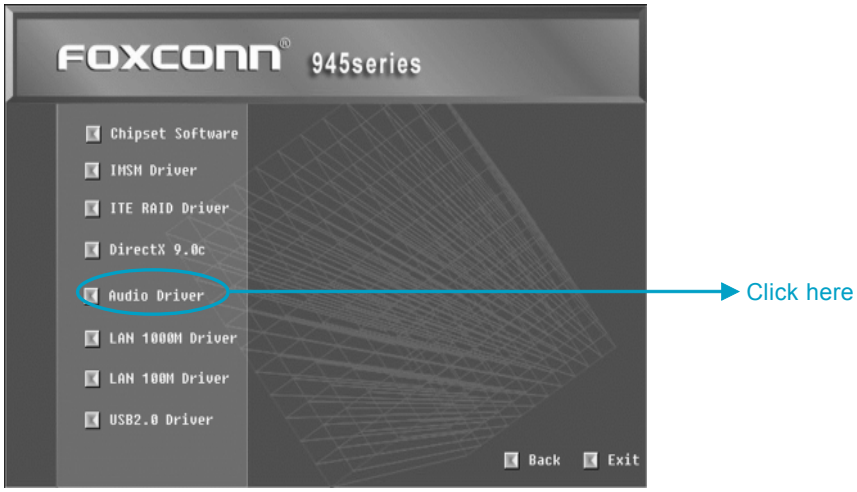
In the 8-channel surround sound configuration there are the standard front, center, LFE (bass) speakers but also two surround speakers are placed at the sides of a listener, and two speakers directly behind the listener. Some formats also support a 6-channel audio configuration wherein there is only one speaker behind the listener. However, since audio connections always come in stereo pairs most PC hardware will automatically support the 8-channel configuration. It is also fully supported in the Windows XP operating system.

2. Using 8-channel Audio

STEP 1. Connect the front channels to green jack, the rear channels to orange jack, the Center/Subwoofer channels to black jack and Side channels to grey jack. Please refer to below figure.



STEP 2. You need to install the driver for the audio chip before you can use the 8-channel audio function.



STEP 3. After installation of the audio driver, you'll find an icon on the taskbar's status area. Double click the icon, you will see the following picture.

STEP 4. Click "Speaker Configuration". The following picture will appear.

STEP 5. Make sure you select "8CH Speaker" from the above picture. Now you can enjoy the 8-channel audio function.